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ABSTRACT

This research study examines the practical, personal, and intuitive knowledge that elementary fine arts teachers employ in their classrooms and how that knowledge is transmitted in the profession. Chapter 1 reviews the assumptions about elementary arts teachers. Chapter 2 reviews the literature on personal knowledge with emphasis given to Michael Polanyi's notion of personal knowledge that links aesthetic thinking, action, and learning, while chapter 3 discusses previous research on the practical knowledge of teachers. The exploration of intuition in fine arts teachers is the focus of chapter 4, while chapter 5 discusses previous research methodologies and the methodologies for this study. Chapters 6 and 7 contain data gathered from the teacher interviews. The study's summary is contained in chapter 8. Findings indicate that fine arts teachers are highly dedicated and committed to arts education and employ intuition with practical knowledge in classrooms. The appendices include: (1) a sample letter written to the school board directors; (2) the interviewer's guide; (3) a sample of raw data; (4) a sample of data analyzing imagery and metaphor; (5) suggestions for the dissemination of the research material; and (6) a proposed video script, "Spontaneity and Structure: A Case Study of an Arts Teacher's Practical Knowledge." An bibliography of 153 references is included. (DJC)

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NO ONE WAY OF BEING

A Study of the Practical Knowledge of Elementary Arts Teachers

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Chris Ward, Minister
Bernard J. Shapiro, Deputy Minister

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Ministry
of
Education
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ABSTRACT

The practical knowledge of Arts teachers (elementary) is that specific mixture of tacit and explicit knowledge, intuition and experience that allows them to operate well in the classroom. This research shows a correlation between the literature and the data, but many items were unique to the study.

In the literature review of the teachers' practical knowledge and intuition, items related to Arts teachers were few and so tangential evidence was reviewed. After a pilot study, a sample of elementary Arts teachers was selected from various Ontario school boards (tempered by demography), from those identified as having "highly active" programs. Observations, interviews, data, and analysis were gained through grounded theory methods.

These elementary Arts teachers had excellent practical knowledge. If they expressed it explicitly they did so from a particular instance and not from abstract theory. They had good Arts experiences but may not have had pre-service Arts training. They strongly believed in the value of integrated Arts "across the curriculum". They felt good about themselves as Arts teachers but regretted that Arts education was not highly regarded by society. Many were innovators and risk-takers who made sound intuitive judgements. They were committed to lifelong learning and to their students, spending a great deal of time and effort to help them achieve success and self-esteem in their work.

Their procedural knowledge included the teacher-as-catalyst role, the "learning by discovery" method, proceeding from the known to the unknown, and an emphasis on indirect as well as direct learning. They had flexible attitudes to the teaching context, the learners, social expectations, learning outcomes, Arts integration, content or subject matter, and other items. They adequately diagnosed students' needs, monitored their learning, discerned their capacities for imagination, skill and judgement, and assessed their levels of creativity.

They encouraged in their students the self-confidence to make choices between alternatives, the freedom to make mistakes and learn from them, and taking responsibility for their decisions.

These and other findings may not only affect the way in which these teachers are regarded, but also how they regard themselves. This study also provided criteria for identifying good elementary Arts teachers.

The whole concludes with recommendations for future research, various appendices, and a lengthy bibliography.

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- officers of the Ministry of Education, for their assistance and their belief in the project.

MIND

Mind in the purest play is like some bat
That beats about in caverns all alone,
Contriving by a kind of senseless wit
Not to conclude against a wall of stone.

It has no need to falter or explore;
Darkly it knows what obstacles are there,
And so may weave and flutter, dip and soar
In perfect courses through the blackest air.

And has this simile a like perfection?
The mind is like a bat. Precisely. Save
That in the very happiest intellection
A graceful error may correct the cave.

Richard Wilbur

8

CHAPTER 1

THE PROBLEM

How do good Arts teachers operate and what do they know? The issue revealed by these questions is not easy to resolve because, most commonly, good Arts teachers cannot articulate their knowledge and their expertise.

This issue is the subject of the present study. But we discovered it was even more complex than we had initially thought. Not only were we trying to uncover the skills and knowledge that Arts teachers had difficulty in expressing, but also we found a wide variety of opinions about what were skills and what was knowledge.

Things were made no easier by a lack of agreement about terminology. Different terms can mean virtually the same thing: "tacit knowing" in philosophy, "unconscious knowing" in psychology, and "intuitive knowing" in Arts education. So, when educational researchers described the same phenomena as "personal knowledge" but did not state which emphasis they were using, we faced considerable difficulties.

As a result, we had to make some precise decisions if the study was going to be of use. Some of these decisions may appear arbitrary at first reading. But we are sure that the reader, upon reflection, will understand and even appreciate the necessity for doing so. Thus, in this study:

Personal knowledge = tacit, unconscious, intuitive knowing.
Explicit knowledge = conscious (even abstract) knowing.
Practical knowledge = "know-how" which can be tacit and/or explicit.

AIMS OF THE STUDY

MAIN AIMS

The major intentions of this study were to discover the practical, personal, and intuitive knowledge by which good elementary Arts teachers are guided and the body of beliefs that is transmitted in the profession.

EXTRAPOLATION OF AIMS

To achieve these aims, the study attempted to ascertain: the assumptions of elementary Arts teachers; the nature of their practical knowledge; their procedures that reveal assumptions and practical knowledge; whether a practical theory of Arts teaching could be revealed that was understandable at all levels of the education profession.

Before we began the research, we had to extrapolate these aims in common sense terms. We needed to consider what they meant to us within our own experience, rather than in the categories of social science. This provided us with a personal framework in which to set the subsequent review of the literature and the data of the actual research.

A THE ASSUMPTIONS OF ELEMENTARY ARTS TEACHERS

Elementary Arts teachers are usually generalists though some specialists exist. Generalists acquire their assumptions about Arts education from their own schooling, public opinion, and their generalist pre-service teacher education. While some assumptions are shared by all elementary teachers, Arts teachers have some that are unique. Three examples will serve.

Some music teachers have "the director's syndrome" - they view themselves as conductors disciplining music ensembles that aim for public performance. Others advocate "creative music" and view themselves as stimuli for students' musical creativity. Still others consider that their prime purpose is to evoke a greater sensitization to the manipulations in music - thus fostering an aural awareness of musical procedures and structures. Thus there is no common model of a music teacher.

A similar type of contrast between models exists amongst dramatic arts teachers. Twenty years ago the common model was that of the stage director. Current evidence indicates that a newer model varies between "teacher in role" and "teacher as catalyst". The assumptions of drama teachers, therefore, appear to vary between three types: (1) objectivity and absolutism - the stage director model, (2) existential felt-experience - the Heathcote model (Johnson and O'Neill, 1984), and (3) subjectivity and romanticism - the Slade (1954) model.

In visual arts education, few teachers parallel the performance model of music and drama. Rather, most appear to have assumptions based on freedom of self-expression - in the Herbert Read (1943) mode as extrapolated in the Hall-Dennis Report (1969). These assumptions, however, have provided such teachers with considerable difficulty in adjusting to the changing educational climate. Some have opposed quantitative methods of assessment. Others have put forward alternative methodologies yet without, perhaps, having grasped the underlying issues.

These are common sense indicators related to the problem. They were shared by the investigators prior to the study. But do they, in actuality, fit the facts? Are the assumptions of elementary Arts teachers as diverse as they appear? And what elements do they share?

B THE PRACTICAL KNOWLEDGE OF ARTS TEACHERS

It is a basic assumption of this study that good Arts teachers have practical wisdom with which they operate in the classroom. But this is not necessarily conscious or understood by them.

Arts teachers appear to be confused about why, how, and what they do (Courtney and Park, 1980: Part 1; Eisner, 1977; Rockefeller, 1977). These confusions, however, occur when they talk about their practice but not necessarily in the practice itself. Common sense tells us that this may be because, in recent years at least, education has tended to emphasize the cognitive at the expense of the affective/aesthetic. Increasingly, Arts teachers have been asked to account for their work in terms that make only partial sense to them. Yet their actions indicate that, behind their verbal confusions, they have logical reasons for how, why, and what they do.

C THE PROCEDURES OF ARTS TEACHERS

The procedures of good Arts teachers reveal both their assumptions and their practical knowledge. "What they do" is a signifier from which we can infer in common sense terms what is signified.

One example will serve. Dramatic arts teachers have been shown by Heathcote (Johnson and O'Neill, 1984) to have individual "thresholds", and this can be generalized to all teachers. Thus some can accept a great deal of noise while students are working but others cannot. The same applies to space: the more authoritarian teacher distances him/herself from the students; the more democratic is liable to be surrounded by students. The way a teacher handles such thresholds indicates his/her biases in both assumptions and practical knowledge.

Differences of this kind become reflected in a teacher's views of what constitutes an effective procedure. "Does it work?" immediately gives rise to the question, "Effective for what purpose?"

The whole issue of evaluation - of students and programs - is thus laid bare. The kinds of "improvement" or "change" that are expected are predicated upon particular assumptions and forms of practical knowledge. What is "effective" for one Arts teacher may not be for a second.

D A PRACTICAL THEORY OF ELEMENTARY ARTS TEACHING UNDERSTANDABLE AT ALL LEVELS OF THE EDUCATION PROFESSION

From the investigations indicated at A, B, and C above, this study aimed to extrapolate a practical theory of Arts teaching. In other words, from the data collected about elementary

Arts teachers' assumptions, practical knowledge and procedures, it was assumed that theoretical emergents would be discovered.

We could not know what this was at the beginning. Rather, it had to emerge from the data. This is the way human beings proceed in mundane existence. In life all knowledge is, as Popper (Miller, 1985) puts it, a matter of estimation and what we do with a hypothesis after it has been formulated.

COMMUNICATION OF THIS STUDY

It is important that Arts teachers make use of this study. After a survey of the literature and a discussion of the methodology, it proceeds by collecting empirical data, analysing these, and finally it puts forward the emergent theory.

But there are some difficulties in communicating theory to practitioners. In the past, teacher scepticism about educational research studies has centered (quite properly) upon their usefulness. However scholarly a study, if it is not clearly understood by teachers so that they can use it effectively, it will be of little use. Thus we face two issues that are linked: understanding and usefulness.

How useful this study will be can only be discovered over time. From the beginning, however, two steps in the communication process were designed:

1 This scholarly report is intended chiefly for informed practitioners.

2 A further and later stage of the study was to discover methods, other than those contained in this report, for effective communication and dissemination with all teachers (see Appendix 5).

That being said, we can now proceed to the study itself. This has the following structure:

- Chapters 2, 3, and 4 review the literature - Chapter 2 on personal knowledge, Chapter 3 on practical knowledge, and Chapter 4 on intuition;
- Chapter 5 discusses the methodology;
- Chapter 6 is an analysis of the data;
- Chapter 7 discusses the results;
- Chapter 8 outlines a summary of the study and makes recommendations for future considerations.

Additionally, there are appendices and a full bibliography.

CHAPTER 2

HUMAN ASSUMPTIONS

The study of practical knowledge has in recent years occupied a number of educational researchers. Practical knowledge is normally assumed to be the knowledge base for teachers' practical reasoning (Farrar, 1983). But to fully grasp the significance of practical knowledge in education, we must grapple with the issues of knowledge itself, particularly what is known as "personal knowledge". We shall deal with these issues here before turning to practical knowledge in Chapter 3.

KNOWING

Traditionally, knowledge was assumed to be objective: there was some ultimate "truth" to which we all aspired. Aristotle thought we could gain knowledge of truth through "the scientific method" of empirical deduction of which the classical syllogism was:

> All men are mortal.
> Socrates is a man.
> Therefore, Socrates is mortal.

Working from the general to the particular, it was assumed, gave universal laws.

But for the past century or more, these ancient categorical ways of knowing have broken down. It is now generally accepted that there are a variety of ways to know. How did this occur?

First, Bertrand Russell destroyed Aristotelian logic by saying that the syllogism was, in fact, a sentence: it worked by substituting one sentence for another. So he substituted the sentence, "The King of France is bald." But this made no sense for two reasons: first, there was no current King of France; second, no known King of France had been bald! The replacement of classical logic was achieved by Wittgenstein who put forward the view that knowledge is gained by using "criteria in contexts" (Best, 1974). That is to say, knowing comes in the relation between: 1) using criteria that are rational but 2) in a specific context (see p. 17). Thus we use criteria that are rational for us (which may differ between individuals) and relate them to a specific context (China, for example, if we are judging a Chinese dance).

Second, Einstein's relativity destroyed Descartes' notion that life and the universe were a gigantic machine; in fact, they were aspects of the relationship of time/space. This led to Heisenberg's theory of indeterminacy - that the observer is part of the experiment - the foundation of contemporary quantum physics. In other words, classic objectivity producing laws (or "truth") does not exist. Accuracy is only possible from "a particular point of view".

What we know, therefore, is from our point of view. But if our knowledge is to be logical it must use rational criteria as related to a specific context. It was from these foundations that contemporary attitudes to knowledge grew, one of the most important being Polanyi's theory of personal knowledge.

PERSONAL KNOWLEDGE AND POLANYI

The work of Michael Polanyi (1946, 1958, 1959, 1966) has increasingly attracted attention since it was written. To him, all human knowledge is personal and not, as Soviet Marxists and Fascists had it, politically determined. Rather, he said, scientific inquiry was "closely akin to creation in the Arts": it rested not on proof but upon personal belief. In other words, each one of us has a personal attitude to what we know - a notion that matches Heisenberg's theory of indeterminacy.

DISTINCTION: PERSONAL AND OBJECTIVE KNOWLEDGE

Polanyi's view of scientific inquiry is that it is misunderstood even by many scientists. This idea was not original to Polanyi: it has been stated by many before him, such as Whitehead. But Polanyi's way of putting the issue is such that it is highly influential, particularly in contemporary educational theory.

In Polanyi's view:

> The declared aim of modern science is to establish a strictly detached, objective knowledge. Any falling short of this ideal is accepted only as a temporary imperfection which we must aim at eliminating. (1966)

For Polanyi, as for most distinguished scientific thinkers, this is insufficient. Tacit knowledge underlies all other knowledge. To eliminate all tacit (personal) knowledge would be, in fact, to destroy all knowledge. The ideal of an objectively exact science is, therefore, not only misleading but false.

Polanyi thus opposes the founders of experimental psychology (from Mill through Watson to Skinner) who took their models from the most objective and perfect physical science, mechanics. It has become a commonplace in modern scholarship to point out that a mechanistic view of the universe (based on Descartes and Newton) was destroyed by Einsteinian science. Mechanists wrongly assume that their objective attitude is based on the laws of physics and chemistry, says Polanyi: machines are the sum of their parts and are defined by their operational principles which also include their mechanical purpose; but physical and chemical processes are involved that are not subject to the same laws as mechanical engineering. Engineering and physics are different sciences. Moreover, Polanyi points out, all manifestations of life are not governed by the same laws as physics and chemistry. "We know more than we can tell," he says (1966).

While Polanyi does not oppose the notion of "emergence" (common to Darwin, Spencer, and the twentieth century philosophers Alexander and Broad), he sets it in the context of the "emergence of consciousness". From this position, he opposes knowing as an objective operation and considers it to be "an intellectual commitment" (Polanyi, 1946). In a variety of places elsewhere, he says that knowing is "a passion" - which is far from the stereotypical view of science.

THE TACIT DIMENSION

Polanyi stresses the difference between the tacit dimension of the cognitive process and the overt or explicit dimension. When we recognize a friend's face, we cannot list the various parts on which our recognition is based. We have a total impression, a gestalt, a "significant whole".

Polanyi's first examples of tacit knowing are drawn from "the way we understand the significance of articulate language": the fact that the mere sound of a word or sentence can communicate to a person a complex meaning is due to the unconscious and tacit knowledge he has accumulated in the past. Polanyi goes on to show the all-pervading influence of the "tacit component" in every higher level of human thought, providing examples from the fields of manual skill (as with the great sportsman who does what he intends "without thinking") or the musician improvising at a piano while talking to a friend (Polanyi, 1958). This process is universal:

> ... nearly every one of the actions and decisions we take in our everyday life are the outcome of a host of unspecifiable assumptions, which could never be formulated explicitly, much less demonstrated or proved. Each of us manifestly knows far more than he can tell. (Burt, 1969)

The tacit dimension, in other words, is present in all knowing: it is made up of the basic assumptions or beliefs, often unconscious, with which we operate.

KNOWING AND METAPHOR

What is the structure of such knowing? Importantly for this study, Polanyi indicates that the structure of tacit knowing is the metaphor. A metaphor in language is essentially to understand two things at the same time, one in relation to another. Thus we understand "the roses of her cheeks" as two things in one - while "cheeks" is the dominant notion, "roses" are related to "cheeks". It "involves two things, or two kinds of thought" (1966). That is, the functional structure of personal knowing is a metaphoric relation: "We attend from something (in order to) attend to something else" (ibid).

Personal knowledge has a double structure: it indicates a meaningful relationship between two ideas. For Polanyi we are first aware of the contents of the ideas: the two particulars within the relationship; we then become aware of the dynamics: the relationship itself.

Polanyi also says we distinguish "focal awareness" from "subsidiary awareness". The latter may tacitly affect the former: as when a doctor examines a patient, or a dramatist outlines the plot before developing the dialogue.

But as metaphor is the foundation of personal knowledge (and, therefore, of all types of knowledge), Polanyi indicates that it has qualities that are important for this study, as follows:

1 Existential Knowing

Polanyi precisely states that tacit knowing is knowledge OF (1966). This he calls its ontological aspect, or structure. In other words, the metaphorical meaning of personal knowledge is what we LIVE THROUGH. This has close relationships to the views of Phenix (1964) in general education, and Heathcote (Johnson and O'Neill, 1984) in drama education.

2 The Bodily Metaphor

Polanyi says that the structure of perception is the key to knowing. Our bodies are constantly perceiving external objects and:

> ... we keep expanding our body into the world, by assimilating to it sets of particulars which we integrate into reasonable entities. Thus ... we form, intellectually and practically, an interpreted universe populated by entities, the particulars of which we have interiorized for the sake of coherent entities. (1966)

Modern studies in metaphor (e.g., Lakoff and Johnson, 1980) support the view that much of our personal knowledge is formed in terms of "the body-in-the-world".

3 Semantics

Personal knowledge creates a relationship between two ideas and, thus, brings about a particular kind of sign: what Polanyi calls "the semantic structure of tacit knowing" (1966). In other words, it is the dynamic process of the relationship that brings meaning. This is a notion with obvious connections to current studies in semiotics and semantics, specifically those in aesthetics and education (pp. 13-15).

THE ARTS: KNOWLEDGE AND METHOD

Polanyi makes a contrast between scientific investigation, which deals with the abstract, and the Arts and literature, which are confined to the particular: "the scientist seeks to arrive at the most universal concepts and the most comprehensive laws; the poet, the painter, the novelist, and the historian concentrate on specific individuals, specific situations, and on a unique sequence of events." In other words, the scientist deals with quantitative characteristics and studies only one variable at a time; the artist, on the other hand, deals with the qualitative characteristics of the concrete, with the comprehension of highly complex wholes (Polanyi, 1958). This has support from studies in creativity which show that, "Arts specialists are on the whole 'divergers' and scientists 'convergers'" (Hudson, 1966), and that Arts students do best in "open" problems while scientists do best when there is only one correct answer - although the ablest students do well in both types of test (Burt, 1969). Good Arts teachers would appear to emphasize the divergent but include convergent thinking.

But this is not the whole story. Polanyi recognizes that "the Arts are seen to be no longer contrasted with science, but continuous with it" although in the Arts "the thinker penetrates most deeply into the object of his thoughts". Rather, as Korzybski (1958) would have it, science and art are two different "maps" of the same "territory." As a result, drawing upon the work of Lipps and Dilthey, Polanyi considers that the Arts "must be studied by methods other than those of the natural sciences" (Polanyi, 1966) - an issue which is fundamental to the method of this study.

For Polanyi, then, personal knowledge is our way of understanding ourselves and our environment. It is our powers of understanding that control equally the sciences and the Arts (1958).

DEVELOPMENTS IN PERSONAL KNOWLEDGE

From Polanyi's initiative, modern scholars have developed a variety of notions of personal knowledge. We shall briefly examine the most important of these.

THE UNCONSCIOUS

The significance of the unconscious in mental operations was a particular contribution of Freud. It is now a common assumption in everyday life, in art and in scholarship, even if Freud's determinism is not.

More relevant to this study is the work of Jung who considered that the unconscious had two layers: the personal unconscious and the collective unconscious. While the latter remains open to question, Jung's notion of the personal unconscious is rich and pervades much contemporary scholarship and research.

The unconscious, for Jung, is essentially symbolic. That is to say, its contents consist in representations of previous thought and experience. These representations have symbolic meaning: they do not have a one-to-one relationship to meaning but far greater and imprecise meanings.

When we try to express these unconscious symbolic meanings in everyday life (in speech, for example) we do not directly express them. What is necessary is a kind of "interpretation" in order to discover the true meaning of these symbols. Jung did so in terms of the collective unconscious and universal archetypes (Jung, 1959).

For this study, Jung's importance is that he saw the wide possibilities of symbolic unconscious processes. More contemporary scholarship has used this notion to examine unconscious knowing in a variety of ways: Laing (1969) and May (1969), for example, assume a symbolic unconscious as representing an individual's "world view" much as Polanyi assumes a tacit dimension of thought.

IMPLICIT LEARNING

Learning psychologists have studied personal knowledge, sometimes using the term "implicit learning" (Reber, 1967). From this perspective, implicit learning is natural and it is an effective way to understand complex structures without using conscious cognitive methods of learning. Indeed, Hayek (1962) claims that there are elements of personal knowledge that are beyond the reach of consciousness. Thus:

> In short, implicit learning is a naturally occurring, unconscious, cognitive act, an automatic process of a human mind operating in any complex environment with rich underlying structure with which it must interact. (Reber and Lewis, 1977)

It appears that two psychological processes are involved:

1 Through general differentiation the most commonly occurring items are categorized first. Less invariant items then follow.

2 There is a gestalt-like global apprehension process whereby a configurational representation of the system to be learned is established (Jones, 1971; Reber and Lewis, 1977).

In other words, personal knowledge creates a map of the structural relations of what it needs to know in the environment - but there can be many maps of the same territory.

If personal knowledge creates such maps, these represent reflections of patterns in the environment: mental structures are isomorphic with structures in the world. On this view, errors are a result of incomplete structures. They are not the result of poor representations.

But when someone explains in words their own tacit processes, something else happens. Pylyshyn (1973) shows that what we tell is not necessarily a precise picture of what we implicitly know. Our words may reflect our personal knowledge but they are not the same things - they do not have a one-to-one relation with each other. This is largely because when we speak or write we use a different kind of map - a linguistic system. There is a clear distinction, therefore, between the mapping process of personal knowledge and implicit learning on the one hand, and the way we describe this process in language.

Importantly, research has shown (Allen and Reber, 1980) that implicit learning is retained over a very long time. In contrast, explicit and conscious knowledge (what teachers normally aim to impart) is shown to be relatively fragile in nature; knowledge gained from conscious, analytic procedures is less deeply learned than knowledge in the tacit dimension.

STRUCTURALISM

Structuralism is a way of approaching fields and disciplines. Concern with structures is common to a wide variety of studies: anthropology, as with Lévi-Strauss; cognitive development, as with Jean Piaget; language, as with Noam Chomsky; literature and everyday life, as with Roland Barthes, and so forth.

The foundation of the structuralist approach is that below the surface of events lie inherent structures. Some, like Chomsky, go from immediate structures to "deep structures".

Structuralists share a number of basic assumptions. First, human thought and action have underlying structures. For many scholars, but not all, these structures share similar characteristics to language. Second, to understand a structure depends upon a shift of perspective: from the surface of a "language" to its infrastructure. A further layer of meaning is revealed, therefore, through a metalanguage. Third, to understand total meaning is to comprehend the relationships between the structure of the initial system and that of the infrastructure. These relationships were assumed by earlier structuralists (Lévi-Strauss) to be binary. Many modern scholars, particularly semioticians, assume these dynamics are fourfold (as we shall see below). Fourth, the purpose of structures is to provide forms that allow communication between one model and another.

There is a clear relationship, therefore, between Polanyi's notions of personal knowledge and the views of structuralists. Indeed, Polanyi's work might be regarded as one example of structural scholarship. He, too, assumes that to understand how human processes work we need to grasp how the layers of structures relate - how the tacit and unconscious dimension relates to the conscious, cognitive and explicit dimension. For Polanyi, all phenomena are unities of particulars formulated into wholes; and these wholes can be endlessly reorganized into new wholes. But each group of wholes is a stratum of a hierarchy, and each stratum of a hierarchy is independent of the laws governing other strata (1966). If this is not a structuralist attitude to knowledge, it is very close to it.

CREATIVITY, LITERATURE AND ART

Polanyi addresses the issue of creativity, whether in designing a scientific experiment, formulating a sociological principle, or composing a poem. He says that in all instances creativity is the process of discovering the potential for unity within a set of particulars. Thus:

> When we comprehend a particular set of items or parts of a whole, the focus of our attention is shifted from the hitherto uncomprehended particular to the under-standing of their joint meaning. (1959: 29)

The unity that we try to comprehend pre-exists as tacit knowledge. In other words, our ability to formulate a creative problem implies the tacit knowledge of its solution:

> The pursuit of discovery is conducted from the start in these terms; all the time we are guided by sensing the presence of a hidden reality toward which our clues are pointing; and the discovery which terminates and satisfies this pursuit is still sustained by the same vision. (1966: 24)

The process whereby particulars are combined into larger and larger structures is a concern that Polanyi shares with structuralist descriptions of literature. For example, this is the issue addressed by Tomashevsky (Lemon and Reiss, 1965) in terms of theme and motif.

William J. Free (1974) shows that the artist and the scientist use the tacit knowledge of the possible solution to a structural problem as a guide to creating new structures. The sources of this tacit knowledge are twofold:

1 Knowledge of the structure of the medium being used (Kuhn, 1970: Vol.2, No.2);

2 The level of values outside the work itself and in the real world - as Barthes (1966) says, while a work is being created it interacts with structures in the world and from this interaction takes its "meaning".

The values of the artist and the society, along with the artist's knowledge of the medium, are the key factors in creativity.

It is the tacit dimension, in other words, that allows a work of art to simultaneously exist (1) as an individual entity, and (2) as a participant in larger structures. As Free further shows, the personal knowledge contained within the work's values and forms is social - it also belongs to the larger social and mythical structures beyond the work.

Finally, Free indicates that the notion of personal knowledge can assist us to understand the nature of "aesthetic emotion" (what elsewhere Witkin [1974] defines as "feeling" as distinct from "emotion"). Free puts it that:

> aesthetic emotion ... is an automatic consequence of the recovery of value through the structuring activity. Emotion is implicit in the discovery of themes, and it is part of the statement of value within themes. (1974)

There is always a tacit dimension of feeling in our appreciation of a great work of art even if we cannot agree as to what it is.

SEMIOTICS AND PERSONAL KNOWLEDGE

General Semiotics is a perspective which assumes that human thought and behaviour can be examined as sign systems - but sign systems that are infinitely more complex than the simplistic input/output model. The principles of semiotic inquiry rely on the distinction between:

1 Signifiers, or forms (of the signs themselves); and
2 Signifieds, or expressions (what signs signify).

To put this another way: the investigator infers signifieds from signifiers.

In a previous study (Courtney, 1985a), a theory of aesthetic learning was put forward using the General Semiotics method of inquiry. The general findings of that study, together with the bibliographic references upon which it was based, will not be reiterated here. Instead the main outline of the theory as it relates to personal knowledge will be given.

EXISTENCE AND EXPLANATION

There is a difference between thinking/action/learning (doing) and the metalanguages of this (talking about doing). When we think/act/learn, these are one "whole" in our experience - in life as we live through it. But any inquiry into that whole must be partial - it can only be from a particular perspective.

KNOWING

We have two perspectives on knowledge:

1 BY KIND

The tacit and explicit are complementary. The latter is built on the former.

2 BY MODE

a Knowledge IN: this occurs within our experience and is mainly tacit; it is a combination of thinking/action/learning as we live through existence (or create art).

b Knowledge ABOUT: this is mainly explicit and conscious; it is obtained when we think or talk about our experience (or art) - but it relies upon Knowledge IN for its substance.

THINKING

We form thought structures around meaning. From our biological basis, and the culture we live in, we intentionally create thought structures to find meaning.

When we are born, as William James said, the world is "a blooming, buzzing confusion". Only slowly do we differentiate one part from another part. The first mental structures are those of similarity (e.g., whole/part). From whole/part structures we develop metaphor: one part is seen in terms of another. Thus metaphor becomes the basis of subsequent thought. Metaphoric thought is "double" and we must exercise judgement when we choose to work in two "worlds": the actual ("the real") and the fictional ("the not really 'real'"). The fictional worlds include those of play and art. In the actual world we work with actual objects but in the fictional world we work with representations.

Similarity and metaphor constitute the fundamental mental structures. Opposition is set within the context of similarity; so analogues are prior to digital structures, and wholes are prior to binary structures. Thought is not mechanical. To put this another way, we primarily see the similarities between things. The contrasts and conflicts between things are built upon their similarities. We relate to people and things through the similarities of "dialogue" - we understand other people as beings like ourselves - so that we are "doubles" of each other. (This is not the same as dialectic which is based on the triangularity of thought.)

Metaphoric meaning ("the roses in her cheeks") is based on the similarity of 1-in-2 and 2-in-1. This is prior to, and different from, metonymy ("a crown for a king") which is the juxtaposition of two ideas: as in 1-plus-1. It is metaphoric meaning that leads to symbolic meaning which is diffuse and based on cultural norms. Meaning is not a code (e.g., it is not a 1-to-1 relation) but is labyrinthine.

Thought structures, as they exist and as we experience them, are dynamics that operate through oscillation (e.g., between whole/part, across continua, etc.). The major dynamic qualities of thinking are similarities, contrasts, conflicts, and complementarities.

Thought structures can be mapped (e.g., in a metalanguage) in fours ("quaternities") with a fifth mid-point ("quincunx"). Any thought structure can be represented by "a semiotic square" consisting of four notions, plus a fifth in the centre: notion X1 generates notion Y1 by conflict; each then generates its contrast, X2 and Y2: the quincunx, or mid-point (Z), is the complementary of X1/Y2 and Y1/X2. However, it is the fourth position of the square (Y2) that is capable of the "leap" of creativity.

The structure of aesthetic thought can be mapped as a semiotic square of similarity/opposition/contiguity/differentiation. Aesthetic thinking is a mode of total thought that is grounded in feeling: it is related to emotion but is more discriminatory; and its cognitive elements form personal and tacit knowledge and belief.

Aesthetic thinking (and thus personal knowledge) has specific qualities:

1 It is formed around imagining. Based on empathy and identification, it is the mode of possibility implying choice and judgement. It deals with things we value.

2 It creates "fictional worlds" that co-exist with the actual world. These have been variously called "the play world" and "the aesthetic world." Exemplars are "the worlds" of child's play, theoretical physics, the Arts and literature. These "fictional worlds" appear to be simultaneous with the actual world but, in fact, they alternate in the mind. The fictional becomes the metaphor and/or the symbol for the actual. It is transformational and so is the ground of mental flexibility and creativity.

The structures of aesthetic thinking (and thus personal knowledge) vary with culture. There are some commonalities between humans but there are also variables between cultures.

ACTION

Action signifies the meaning created between mind and the external world ("mediation"). Action makes thought and learning social. It is action that permits the observer to map thought and/or learning through inference. This is to disagree with the behaviourist who sees action as behaviour that is conceptually distinct from knowing and learning. Thinking/acting/learning are seen as a "whole" and an observer can use inferences from acting (signifier) to understand thinking and learning (signified).

Action is dramatic and performative. Internal empathy and identification, when externalized, become "putting the self in someone else's shoes" - the basis of "dialogue". This generates hypothesis: "If I hypothesize my role this way, then the results are so-and-so." Action provides Knowledge IN: it is "thinking on the feet". It specifically provides tacit, personal and embodied knowing rather than explicit and discursive knowing. The latter occurs when we talk ABOUT action.

LEARNING

Learning is the change of the organism within experience. Tacit learning is aesthetic: it is intrinsic and performative. As it is "learning to learn" it is the necessary ground for all other learning.

This type of learning can be mapped by an observer through combining the semiotic square with Russell and Whitehead's Theory of Logical Types.

CONCLUSION

This brief overview of a previous study indicates that Polanyi's notion of personal knowledge is of considerable importance. Its links with aesthetic thinking/action/learning indicate that it plays a vital part in human life and, as a result, cannot be ignored by education.

Human assumptions are tacit and unconscious. They are energetic processes based on metaphor; they are simultaneously two things in one, the actual and the fictional. But so are the Arts. They are two things simultaneously: the actual, and a representation of the actual. When we create art, most of our thinking, action and knowledge is specifically tacit and personal.

CHAPTER 3

PRACTICAL KNOWING

What is the practical knowledge of Arts teachers at the elementary level?

This is the fundamental question of this study. This chapter will review the research literature as follows: practical knowledge as such, that of teachers, and that of Arts teachers.

KNOWLEDGE AND REASON: THE PRACTICAL

The knowledge base for the practical reasoning of teachers in teaching situations is known as "practical knowledge," as we saw in Chapter 1.

TACIT AND EXPLICIT KNOWLEDGE

Practical knowledge has two constituent dimensions: the tacit and the explicit. The tacit dimension, as we have seen, is personal knowledge - the things we know we know. Unlike personal knowledge, explicit knowledge is normally framed in language and can be talked about. At the same time, however, the tacit is inherent in the explicit. That is to say, when we say we know something this means that our explicit knowledge matches our assumptions and beliefs - it fits our unconscious perspective or "world view" (Pepper, 1942).

This does not mean, however, that our personal knowledge (and therefore our practical knowledge) cannot be changed. As Patte (1982) has shown clearly from semiotics, changes in the tacit dimension bring about learning in a particular way. Patte's illustration of this is the parable of The Good Samaritan. Jesus' first audience was confronted by a parable that challenged their unconscious assumptions and beliefs: that priests and Levites were "good" and Samaritans were "bad". As Jesus' telling of the parable was an important and significant event to them, the audience now had two conflicting sets of beliefs and assumptions: the "new" view about priests, Levites, and Samaritans, and the "old" view. If their subsequent experience of priests, Levites, and Samaritans matched with the "new" view, their tacit beliefs and assumptions would change; but if their experience matched their "old" view, their personal knowledge would not change. Their unconscious thought structures either changed or not according to common sense experience.

REASONING

The tacit dimension of thought affects the reasoning we use in practical situations. As we have seen earlier, the post-Wittgenstein view of reason (Best, 1974) is that it uses "criteria in context". This can be illustrated when we make a judgement as to whether a particular performance of Chinese dance is "good" or "not good". Such a judgement is relational and is not empirical. To make such a judgement, reason follows two procedures:

1 It uses criteria. In the tacit dimension we use unconscious criteria based on our assumptions and beliefs. Thus we can use Aristotle's criteria (which he assumed related to explicit knowledge) of deduction and induction. But in the tacit dimension we can also use interpretative and moral criteria which are dependent upon our unconscious perspective, or "view". Under these circumstances, the criteria I use to make a rational judgement may be different from yours. Thus one of us might use the moral criterion that this particular Chinese dance is "proper" or "improper". The other might not. Criteria affect judgements.

2 It uses a specific context. Whatever criteria we use, we must place them in the context of Chinese dance: how does this particular dance relate to Chinese dance as a whole? If we have no experience whatsoever of Chinese dance, we cannot make a rational judgement. Thus occurs the famous story of an Eastern potentate who, after attending his first concert by a European symphony orchestra, was asked what piece he liked best. "Oh!", he replied quickly, "The piece before that man came in and waved his stick!" Judgements are affected by context.

What is significant in this discussion is that the largely unconscious personal knowledge and tacit reasoning is the ground that underlies all conscious knowledge and reasoning. Whether we wish it or not, the desired objective knowledge of classical mechanists is not an option for us. This specifically applies to teachers' practical knowledge.

From this discussion we can now turn to the practical knowledge of teachers.

PRACTICAL KNOWLEDGE IN EDUCATION

Before we consider Arts teachers, we need to set the context of practical knowledge in education as a whole.

THE PRACTICAL KNOWLEDGE OF TEACHERS

Practical knowledge consists of those sources of knowledge within the individual that allows him or her to operate in a practical situation. This has been defined in terms of teaching as follows:

> Teachers' practical knowledge is the knowledge base for teachers' practical reasoning. It is seen as consisting of both intuitive and conscious decision-making abilities. Teachers exhibit a wide ranging practical knowledge base in their work including knowledge of students' learning styles, interests, needs, strengths and difficulties, a repertoire of instructional techniques and classroom management skills, theoretic knowledge of subject matter and areas such as child development, learning and social theory, as well as knowledge of the social structure of the school and the community. All these kinds of knowledge, as integrated by the individual teacher in terms of personal values and beliefs, and as oriented to each practical situation in order to make sense of it, constitute teachers' practical knowledge. (Farrar, 1983)

That is to say, "teachers hold a complex, practically-oriented set of understandings which they use actively to shape and direct the work of teaching" (Elbaz, 1983).

Good teachers hold a number of working assumptions that they use in the practice of teaching. But these do not, in themselves, constitute a theoretical account of practical knowledge. They consist mainly of ideas, many unconscious, which enable them to work on the problems of teaching. Elbaz (ibid) considers that such practical knowledge has the following characteristics:

1 ORIENTATION - the way practical knowledge is held and used.

- Orientation to Situation.
  Practical knowledge is used in specific situations: a body of knowledge oriented to a particular practical context. The teacher gains such knowledge in the mundane ways of everyday life - observation, comparison, trial and error - together with normal processes of intuition and reflection.
- Orientation to Person.
  It is based on personal knowledge (see Chapter 2) which provides a particular perspective. This is motivated by the entire range of human feelings, needs, cognition, and emotions. It results in the teacher being the ultimate authority on what occurs in classrooms in a responsible and meaningful way.
- Social Orientation.
  It adjusts subject matter and instructional methods to social conditions and expectations. At the same time, however, the manner in which a teacher responds to social conditioning is a matter of his/her deliberation and choice between alternatives.

- Experiential Orientation.

  Practical knowledge has an experiential basis: the teacher constructs "a social reality" of the classroom (Berger and Luckman, 1966) which is complete unto itself. The non-teaching world is "bracketed off" and this gives coherence, shape, and structure to teaching and learning.
- Theoretical Orientation.

  The training of teachers, together with the forms of thought and discourse that go on around them, provide a theoretical milieu in which they use practical knowledge. If articulated, this becomes theory "proper"; in most instances, however, it remains at the level of theoretic orientation.

2 STRUCTURE - its internal form.

- Rules of Practice, or specific directives. These are clearly stated pronouncements of what to do and how to do it in a particular situation.
- Practical Principles.

  At an intermediate level of generality, these are principles which enable teachers to profit from experience.
- Images and Metaphors.

  These are statements by teachers that reflect images of themselves and of their view of teaching situations. They are sometimes imbued with a judgement of value, which is expressed in the ways they work.

3 COGNITIVE STYLE - the manner in which it is held and used.

The way in which teachers act, as informed by knowledge, varies between individuals. This is revealed by the images teachers use about curriculum, subject matter, instruction, milieu and personal knowledge.

> This view of teachers' thinking processes is comparatively new. Although teachers have been the subject of considerable research, they are not commonly seen to possess a body of knowledge and expertise appropriate to their work and this tends to diminish their status in the eyes of laymen. It is hardly surprising that teachers have developed no such articulated body of knowledge, if we consider the context of teacher. To begin with, teachers are trained in a setting which is rarely seen by them as serious or relevant to their future work; thus, whatever conceptual skills they might acquire during their training would tend to be compartmentalized, rather than applied to the understanding of teaching. In teaching itself, while teachers may often rehash and compare experiences, they in fact have little experience that is shared, and there are few opportunities for them to reflect on and attempt to articulate their experince in an organized way. Finally, the view of knowledge as "empirical" and "analytic," which prevails in educational thought, tends to place a relatively low value on experiential knowledge, and thus teachers themselves may be unaware of the

> value of their own knowledge. Certainly there is little encouragement for teachers to view themselves as originators of knowledge. (Elbaz: 11)

This view is both mistaken and misleading, as Elbaz goes on to show from a variety of studies. Reid and Walker (1975) indicate that among teachers there are stable bodies of ideas about how to teach and what to teach while Hunt (1976), by regarding teachers as persons, shows that their practical knowledge is shaped by the conceptions of students, teaching approaches, and learning outcomes. Other studies have demonstrated additional aspects of teachers' practical knowledge: it contains constructs of curriculum, child development, and learning (Bussis, Chittenden, and Amarel, 1976) and it includes linguistic expressions that manifest socially conditioned predispositions (Barnes, 1976; Keddie, 1976; and Esland, 1976). Other relevant research studies are reviewed by Peterson and Walberg (1979), and Shavelson and Stern (1981). These show (amongst other things) that:

- Teachers use the prime cognitive processes of information selection and inference to bring about the implicit rules of practical knowledge.
- Teachers make reasonable judgements and decisions with the intention of increasing student learning: to do so, they integrate large quantities of information about students' cognitive, affective, and behavioural states to make pedagogical decisions. In the main, these are fairly accurate.
- Teachers make decisions and carry them out on the basis of their psychological model of reality, which is a constituent part of their personal knowledge.

CONTRIBUTIONS OF CURRICULUM THEORY

Since 1970, several researchers in curriculum theory have made major contributions to the study of practical knowledge. Schwab (1970, 1971, 1973) places a focus on the distinction between practical and theoretic reasoning, a distinction that originated with Aristotle and is now common in contemporary epistemology and logic. Schwab's work, originating in Dewey and coming as it did on the heels of the destruction of classical logic and the stress on personal knowledge, has become classic reading in curriculum theory. Subsequently a number of curriculum researchers have attempted to define and elaborate on the nature of practical knowledge, particularly teachers' practical knowledge (Clandinin, 1983; Connelly, 1972; Connelly and Clandinin, 1983, 1985; Elbaz, 1980: Reid, 1978; and Reid and Walker, 1975).

In terms of curriculum development, as Connelly points out, historically there have been two approaches:

1 That which is centralized tries to impose change from the top down and teachers are assumed to be merely transmitters of knowledge and ideas. Although developers claim that curricula intentions are realized, research does not substantiate this. It is classroom teachers that must implement the curriculum as designed and they can and do modify it.

Even very experienced science teachers have attitudes to curriculum inquiry that are "barely distinguishable from untrained teachers". Teachers are "highly autonomous agents" and there is no evidence to support the fact that "this autonomy may be circumvented" by curriculum developers.

2 That which is decentralized ("school-based curriculum") implies that teachers are initiators of ideas. It also recognizes that teachers' practical knowledge resides in knowing particular schools and students. Connelly goes on to suggest that the remedy does not lie in either extreme but to use the strengths of both. Discussing what he calls teachers' "minded practical life", Connelly puts forward notions of how to discover practical knowledge. We shall discuss methodology in Chapter 5.

CONSCIOUSNESS OF TEACHERS

The nature of personal and practical knowledge varies between individuals, as we have seen. Just as Heisenberg said that scientists have individual perspectives on events, the personal and practical knowledge of teachers vary according to individual consciousness. How, then, does consciousness affect personal and practical knowledge?

Consciousness is a term for which there are synonyms in various disciplines: "Being", "Ego", "Self", and so forth. We will use the term "consciousness" here as indicating "the self aware". But aware of what? It has been a major contribution of Husserl, Heidegger, Sartre, and other phenomenologists and existentialists that there is always "consciousness OF" - of the self and of others. As Kierkegaard said, "The more consciousness, the more self, the more consciousness, the more will, and the more will, the more self." Nietsche articulates that:

> We knowers are unknown to ourselves, and for good reason: How can we ever hope to find what we have never looked for? Our treasure lies in the beehives of our knowledge. As for the rest of life - so-called experience - who is serious enough for that? Or has time enough?

Put another way, we can never be rid of our projections as ways to understand the world - consciousness and personal/practical knowledge are inextricably linked. When we talk about one, we imply the others.

Learning in an educational context is very much a matter of establishing the "self" in a shared world - the teacher's and the student's. Bernard Curtis shows that in a teaching/learning situation we can refer to the teacher or the student in one or more of the following respects:

1 That he was or was not conscious of what was going on.
2 That what was going on did or did not mean something to him.

3 That it did or did not mean to him something the other meant by it.
4 That he did or did not have beliefs about it.
5 That these beliefs were or were not verbally conceptualized.
6 That he did or did not desire what went on.
7 That he could or could not help what went on (that he chose that it should happen).
8 That he did or did not have reasons for choosing or desiring it.
9 That his reasons were or were not good ones.
10 That what went on can or cannot be explained in terms of efficient causes. (Curtis and May, 1978)

These kinds of issues are fundamental to the practical knowledge of teachers (as well as students). The ontological function of the teacher, says Vandenberg (1971), is how he/she can let the students participate in their Being, thereby recognizing the significance of educating their Being - and that cannot occur unless teachers acknowledge this for themselves as well.

Drawing upon the notions of Polanyi, Jung, Dewey, and others, William Pinar has outlined a method whereby teachers can reconstruct their experience of both education and existence in order to identify the significant factors of consciousness, personal and projected knowledge. This method asks of teachers:

- What has been the nature of your educational experience?
- How do you use the term "education?" (How do you distinguish between educational and non-educational experience?)
- What areas of study have interested you, at what times in your life?
- What psychological factors were operative that might account for that interest?
- What teachers influenced you - and which ones did not?
- How do you account for the different effects?
- Consider not only your memory of the teaching style and learnedness of the instructor but also your own developmental and educational status at the time: Are you able to generalize about those teachers you found important and those not?
- Are you able to generalize about your states when you were more receptive to the teaching of another person or another area of study?
- What factors influenced your decision to attend college?
- What "place" in your psychic life does your academic career play?
- What is the nature of your interest in the field of education?
- What are your motives for advanced study? (Pinar, 1975)

These questions reveal some of the parameters of consciousness as related to practical knowledge, but they are also relevant to the methodology of this inquiry. (See Chapter 4.)

TEACHERS AND PERSONALITY

An allied notion to personal and practical knowledge is personality. Without the thorny issue of defining this word, we can say that in common sense terms "personality" indicates what makes one person different from another. In much the same way, personal and practical knowledge varies between individuals.

It is commonplace in educational research that a teacher's personality has effects upon learners: groups of students act differently with different teachers; a teacher's opinion of students often depends on his/her opinion of their personalities; it is common for class behaviour to mirror the teacher's behaviour; no one type of teacher appears to be ideal for all students; and so on and so forth.

What elements of personal and practical knowledge within a teacher's personality might indicate success as a teacher? Unfortunately there is no general agreement as to what constitutes teaching success or what practical knowledge goes towards such success (despite the useful overview of Rosenshein, 1982). Crocker (1974) has suggested that there are some personality predictors for teaching success. One is a teacher's attitudes. Human attitudes are coloured and shaped by experiences to produce specific qualities of personal and practical knowledge. A teacher's attitudes, therefore, might well be altered by new experiences. Flexibility is also an indicator. Crocker found that "the most successful teachers tended to be those able to range across a continuum of behaviours, poor teachers always tended to use the same interaction style" (ibid). Flexible teachers showed a particular range of classroom behaviours, namely, they:

- have lesson plans that are open-ended and allow for the unexpected;
- consider alternate means of communication;
- are spontaneous;
- have cognitive processes that appear fluid and unconstrained;
- show close relationships between verbal fluency and creative thinking;
- have theoretical orientations in that they are concerned with meaning and implications (ibid: 83-86).

There is a clear link between these behaviours and the characteristics of practical knowledge described by Elbaz (see pp. 18-20).

Farrar (1983) has suggested a close relationship between a teacher's personal and practical knowledge in the technique of questioning. She considers that it is possible to improve the quality of instruction by making a teacher's intuitive knowledge of questioning more explicit and conscious. Dillon (1982a, 1982b), in surveying the literature on questioning, appears to support the notion that a teacher's questioning reveals personal and practical knowledge. Farrar shows that questioning has long been considered functional in the thinking processes of the questioner. There is, however, no evidence in the research literature that a teacher's personality affects questioning although, in common sense, this would appear to be the case.

A teacher's practical knowledge can be undermined when there are role incompatibilities - a difference between the role expectations of a teacher and his or her personality disposition. This conflict, as Grace (1972) has shown, can seriously affect both the individual's well-being and his/her effectiveness as a teacher. In contemporary schools, a teacher's role is diffuse. There is a lack of specificity as to what is expected:

> ... the business of socializing children, of motivating, inspiring and encouraging them, of transmitting values . . . awakening a respect for facts and a sense of critical appreciation - all of this is un-specific. (ibid)

Many contemporary teachers are uncertain when their job is complete. But individuals need to experience a sense of job success so many modern teachers react to the conflict in their situation by either accepting the intangibility of their achievement, or defining their role narrowly in terms of what is measurable.

Teachers of Arts in particular may be subjected to conflicting role expectations by their colleagues and administrators: what is an educational "frill" for one is essential for the other (ibid: 16). This is compounded because Arts teachers, like all teachers, have two characteristics:

1 they are particularly jealous of their freedom from both administrative and parental interference; and

2 they see their role to be in value-conflict with other aspects of society because of materialism, hedonism, moral standards, etc.

In other words, the role conflict of Arts teachers can be particularly acute and this can affect their confidence, their personality, and the nature of their personal and practical knowledge.

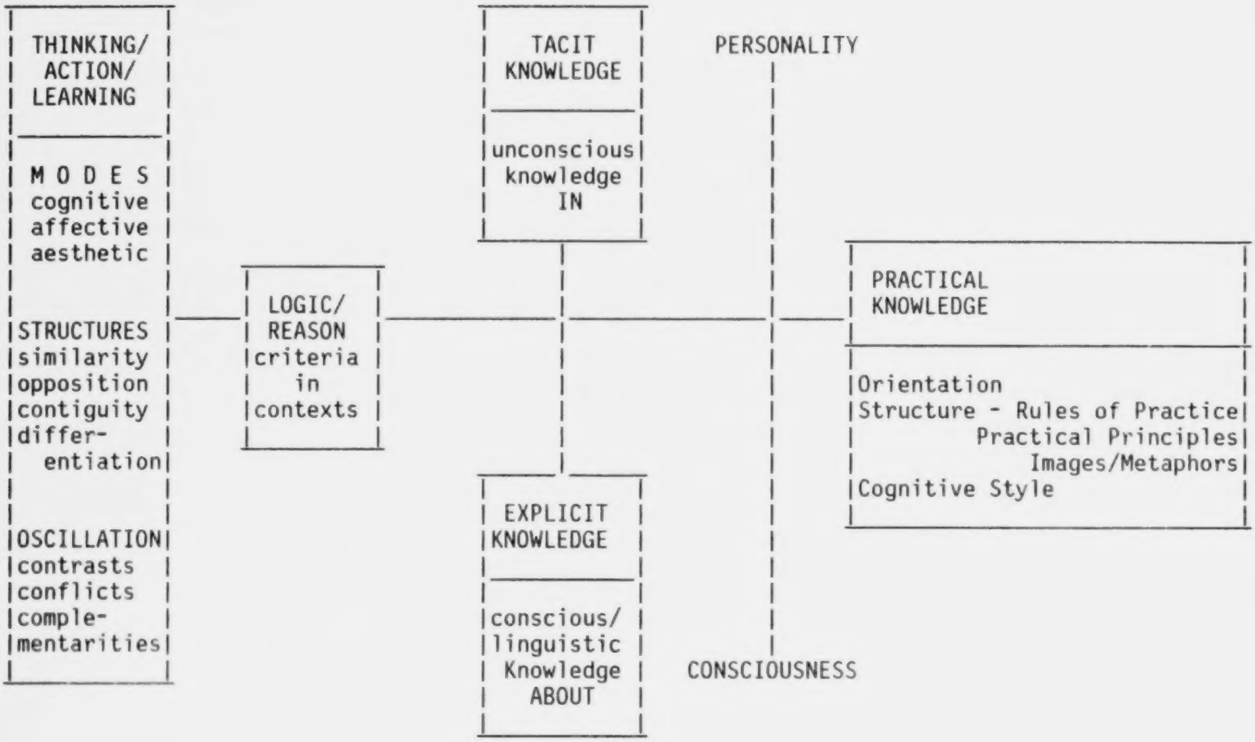
The survey of the literature thus far is summarized in Figure 1.

ARTS TEACHERS AND THE PRACTICAL

Unfortunately, studies in the practical knowledge of Arts teachers are negligible. We identified two studies in music which centered on personal knowledge, but found none which related to the Arts and practical knowledge. This study, therefore, had to rely in the main on inferences from the general literature on Arts education.

ELEMENTARY ARTS TEACHERS

While there are some Arts specialists teaching in elementary schools in Ontario, most are generalists. This also appears to be the case in most Western cultures. Their practical knowledge, we therefore assume, relates to both the general program of studies and the teaching of the Arts.



THE BACKGROUND TO PRACTICAL KNOWLEDGE

Figure 1

Fortunately, as this study was proceeding the Ontario Ministry of Education Arts Group circulated a discussion paper (1984) which was used in a series of regional meetings where there was lively debate (Moore, 1985). From some of the issues discussed we can infer particular aspects of the practical knowledge of Arts teachers.

A Cultural Attitude

In our age of increasing mechanization and materialism, there is a need for increased awareness of the importance of the Arts: for quality vs. quantity, human values vs. material products. Only when the community as a whole commits itself to implementing quality programs, and thus backs Arts teachers with a highly positive attitude, will Arts teachers have encouragement to take a more positive attitude to their teaching and practical knowledge.

B Necessary Skills

The crux of an Arts teacher's practical knowledge lies in two types of skills: skill as a teacher, and skill as an artist. At the secondary level, these skills can only be obtained by the teacher with specialist Arts qualifications; when the teacher does not have these skills, then the student does not receive comprehensive Arts experiences and, in some cases, appropriate knowledge and/or techniques. At the elementary level, these skills are equally required for a teacher's practical knowledge; if the generalist teacher does not have them, then it is essential to have good resource people who can support and/or implement these programs.

C Pre-Service Programs

Current pre-service programs for elementary Arts teachers are inadequate for the development of the necessary practical knowledge. To secure this, it is necessary to:

- greatly increase the hours of courses;
- increase the length of courses beyond one year;
- include personal Arts practice and experience;
- increase time for practice teaching.

D In-Service Programs and Upgrading

The regional meetings particularly stressed the need for more professional development opportunities, together with the ongoing availability of them, in order to increase the necessary skills (as at B. above) and thus improve the Arts teacher's practical knowledge. In particular, boards of education should spend more time, effort, and money on satisfying these needs, and encourage and facilitate their teachers' use of opportunities. Although it is the teacher's responsibility to keep his/her practical knowledge up-to-date, both the Ministry of Education and boards should provide the means for this to occur.

In a previous study, the present authors (Courtney, Booth, Emerson, and Kuzmich, 1985) examined the training of Arts teachers and implied that they required better practical knowledge through:

- increased time in pre- and in-service training;
- more understanding of child development;
- improved awareness of the criteria used for judgement and assessment;
- better sensitivity to new developments in media; and
- encouragement of more links between Arts classrooms and the community.

We can now turn to the practical knowledge of teachers in specific art forms.

MUSIC

The personal and practical knowledge of music teachers is affected by the fact that music in schools has changed very little over many years. Despite the work of various innovators, musical performance (through choirs, bands, orchestras) still dominates most schools. Isolated classrooms, often those with younger children, may include methods derived from Kodaly, Orff or Suzuki; a few may follow "creative music" programs based on spontaneous musical improvisation; some teachers may emphasize "aesthetic" music education. (It should be remembered that many music teachers were required to take aesthetic education courses in their undergraduate years.) It is reported that, when rightly pursued, performance along with creativity and sensitized listening can encourage aesthetic involvement and appreciation. However, the school choir, band or orchestra, remain the basic musical activities in most schools. Unlike the visual Arts and drama, many music teachers must work with old methods; for example it is documented in the literature that in the United States:

> Students not only participate in large ensembles but find the time to engage in marching bands, jazz bands, madrigal groups, swing choirs, ... Musical independence, creativity, and improvisation ... have been dropped, and accurate and satisfying performance of one's musical part has become the objective of school administrators, teachers, students and parents (Colwell, 1986).

This may have a damaging effect upon music teachers' image of themselves as Reese (1980) shows. Those who consider that music in schools should provide aesthetic experiences must face two facts: first, it must not be assumed that the more musical information students possess the more likely it is that their experience will be aesthetic; and second, programs based on performance and appreciation have frequently received less than an aesthetic response from students. This has support from a British study which demonstrated from a sample of over five thousand secondary students that they regard traditional music programs as "a failed Arts subject" - in British secondary schools, students reject how music is taught and yet they "love music!" (Witkin, 1974)

But if the image that music teachers have of themselves can be eroded in such ways, it has faced an equal danger from the rest of the teaching profession. Reese (1980) also shows that educational researchers have characterized existing music education as insubstantial, irrelevant, and superficial and, so, non-aesthetic; and that some theorists consider it a subject that does not exercise "conceptual modes of thought" (ibid: 76) while others find difficulty fitting an aesthetic subject to behavioural objectives and, as a result, ignore or denigrate music. Bowman (1982) shows the music educators' dilemma:

> Uneasy, we attempt to substantiate our endeavours by rendering them and the learnings they are to enhance more explicit; we defer to behavioural accounts of learning and instruction, compiling endless lists of 'competencies' whose concreteness presumably testifies to their authenticity ... to the detriment of such indeterminate states as fascination or wonder or awe, which are so crucial to meaningful learning.

He goes on to say that, as a result, music teachers have paralysed "the spontaneous, intuitive learning strategies that are so indispensable to the meaningful acquisition of knowledge" and they should reconstruct their views "not only of science, knowledge, and learning, but also what we in the Arts are all about".

As a result, both Bowman and Reese ask that music teachers should re-examine their practical strategies in terms of Polanyi's notion of personal knowledge. This is not an isolated call; it keeps reoccurring in the literature of music education. Most recently, for example, the highly influential paper by Reimer (1985) on "Toward a More Scientific Approach to Music Education" indicates the dangers of experimental and objective methods and argues the point that ". . . a human being is . . . like no other human being". Instead of the machine model of mind, he says that:

> ... consciousness is analogous to a melody in a nineteenth century symphony. The unconscious constitutes the rhythm, harmony, counterpoint, texture, tone colour, dynamics and form that surrounds and gives meaning to the melody.

This is a metaphor in the mode of Polanyi.

Bowman uses the notion of personal knowledge to say that aesthetic experience depends on personal participation, or "in-dwelling," and that "the distinction between intellectual and aesthetic activity would appear to be primarily one of degree rather than kind". Thus,

> The work of art presents a more radical novelty than discursive meanings, demands of us a greater degree of participation in sustaining its meaning than does the mere communication of facts ... . The basis of experience with art therefore lies in a self-giving act. But this only tells half the story. As one attends to the art object ... it provides a focus for the myriad emotions, ideas, sensations, and impulses which constitute our being (so that) one's self is existentially transformed ... . Such realignment amounts to nothing less than the attainment of new realities, new perspectives from which to view the world. (ibid)

From such views of personal knowledge, Bowman and Reese can indicate, at least partially, aspects of a music teacher's practical knowledge. For example, Bowman rejects behaviourist accounts as the basis for the music teacher's practical knowledge. Rather, he suggests, it should be founded upon "the rather nebulous inklings and intuitions, the ferment and discontent which are prerequisite to many personality significant insights", personal meaning that is "attained relative to an individual's own interpretive framework", and "the satisfaction gained in personally meaningful musical experiences". This leads Bowman to state a series of principles relevant to music teachers' practical knowledge, namely that their instruction should:

- enhance the intuitive;
- allow for diverse experiential outcomes and indeterminate outcomes;
- assume a catalytic instructional role;
- embrace the entire environment in methodology;
- ensure congruence between methods and the objectives of instruction;
- ultimately promote feelingful musical involvement.

Reese advocates somewhat similar principles although he does not address the teacher's practical knowledge in relation to the students' creation of their own musical material.

The present authors (Courtney, Booth, Emerson, and Kuzmich, 1985) have earlier stressed the need to improve music teachers' practical knowledge through:

- the skills of integration;
- the skills of program and curriculum development, particularly in general music;
- new and innovative methods of instruction;
- increased experience in creative practice in classrooms;
- strategies to raise the general level of music literacy and aesthetic sensitivity;
- teacher self-renewal.

DRAMA

There is no identifiable item in the literature that specifically addresses the practical knowledge of drama teachers.

The present authors (Courtney, Booth, Emerson, and Kuzmich, 1985) have suggested that the practical knowledge of drama teachers includes: the development of intrinsic (personal), extrinsic, and aesthetic knowledge and the ability to play and develop this ability in others. Wright (1984), in asking for research about the practical knowledge of drama teachers, has put forward a conceptual theory of instruction that includes:

1 Basic Skills

The leader should be able to:

a) initiate appropriate dramatic action for the group;
b) facilitate the involvement of the individual/group in the drama;
c) guide individuals within the group towards an understanding of created drama.

2 Major Variables

These affect the choices of the drama teacher in planning/presentation/guidance/evaluation of the lesson:

a) the context of the sessions;
b) the dramatic age stages of the group;
c) the drama experience of the group;
d) the dynamics of the group;
e) the capabilities/interests/needs of the individuals within the group; and
f) the teacher.

The work of Dorothy Heathcote (Johnson and O'Neill, 1984) has important implications for teachers as a whole, and drama teachers in particular. Although she has not addressed the distinction between the personal and practical knowledge of teachers, we can infer much from her work. She is one of the great master-teachers of the twentieth century and she sees herself as a teacher first and a drama teacher second. Heathcote views herself as an "intervening" teacher who struggles to set up shared experiences with her pupils through the subtlety, power, and challenge of her negotiations. Her notions have been shaped by her personal knowledge, a powerful sense of community, and concepts derived from theatre. Working entirely through the spontaneous improvisation of the students, Heathcote ensures that they are responsible for choices and judgements - that the creative drama is their experience, not hers. This experience can be based on life itself, on history, or on any content that is relevant to their beings. She achieves this in two ways:

1 Through significant questioning - challenging questions, questions of human existence, questions that elicit the tacit knowledge of the students. Her attitude to their spontaneous action is that she "desperately wants to know".

2 By spontaneously taking a role within the students' drama, sometimes for a moment, sometimes for minutes at a time, she is able to refrain from "telling" or "showing", and to pay attention to their needs while at the same time withholding judgement, and through the role to negotiate power with the class.

The result is that the students operate through their total beings and do not see themselves as "acting" in any false sense. They combine the cognitive, affective, and aesthetic in their spontaneous action, and mundane experience is thereby elevated to significance and intensity. Thus they can reflect on the experience and, thereby, learn.

In the terms of this study, therefore, Heathcote and the students dramatically "live through" experience drawing on each other's tacit and personal knowledge. As a teacher, her own practical knowledge emerges from the meeting of her personal knowledge, the students' personal knowledge, and their jointly lived dramatic experience. Thus,

> Above all, she recognizes the validity of the knowledge and experience which her pupils already possess. She is dedicated to helping her pupils discover what they already know - to bringing this knowledge into consciousness in order to build a path for change ... . But unlike the ... "progressive" teacher who abandons the child to its own resources, she accepts that teaching is an act of benign interference in the lives of the children ... since learning is the product of intervention ... .
>
> Her aim is to build on her pupil's past experience and give them a deeper knowledge not just of themselves but of what it is to be human, as well as an understanding of the society they live in and its past, present and future. (Johnson and O'Neill, 1984)

In her own writings, Heathcote outlines the kind of knowledge that will support the students she teaches, and the knowledge that teachers require to achieve this:

> For me, an excellent teacher is one who knows the difference between relating to things and relating to people ... . I must be able to see my pupils as they really are ... seeing things from their standpoint ... . I must see what they are in the process of becoming ... . What we are trying to do is to make ordinary experiences significant ... . To distort experience into significance means that we have to get the children to pay attention ... . We

> can only create moments when children stumble upon an authentic experience if we teach with attention to detail and its relation to the whole ... .
>
> Teaching is creative work, and creative work has five features: the drive to want to do it; the feed-back to satisfy the having done it; content of the doing of it - the level of function within the topic area; signals to communicate during the doing and the rituals of going about it ... we must make certain that (teachers) are given experience in committing others to work ... . What is required (is) education for 'being involved in knowing' rather than just knowing by memory alone. It also means being involved in taking and testing decisions rather than accepting the decisions of others; being research-oriented rather than learners about the researches of others ... . So we need to train our teachers to structure for a learning situation to happen rather than a sharing of information in a 'final' way to take place ... . (Teachers must) rely on what they are, where they are in their thinking and how they communicate their ideas ... . (Johnson and O'Neill, 1984)

The practical knowledge of teachers, for Heathcote, is constantly discovering the personal knowledge of oneself and the learners so that they "live through" the spontaneous drama in the same way as we all "live through" human existence. We can infer from Heathcote's work that she develops teachers' practical knowledge from existential notions of consciousness and concepts of personal knowledge.

VISUAL ARTS

Neither tacit nor practical knowledge appears to be discussed, beyond a passing reference, in the research literature of visual arts education. From this and related material, however, we can infer the nature of the practical knowledge of Arts teachers.

The visual arts teacher works practically with the tacit dimension. Robertson (1963) indicates her concern with the view that suggests that subject matter in art is unimportant but that value lies in "the way it is painted". In contrast, she suggests, if a visual arts teacher of adolescent students addresses surface interests rather than content then he/she is neglecting "a deeper level about which even they cannot tell us". The tacit knowledge of the teacher must address the tacit knowledge of the student. The teacher must work from unconscious knowledge, which for Jung is the deepest level of the mind and is "no mere depository of the past", so that "in addition to memories ... completely new thoughts and ideas" can present themselves (Jung, 1959).

This is to acknowledge a close relationship between visual arts education and the creation/appreciation of myth. As Jung points out, it is commonly assumed that myths were "invented by a clever old philosopher or prophet". But the word "invent" derives from the Latin "invenire" which means "to find". The act of seeking is implied and, as

Jung puts it, "the word itself hints at some foreknowledge of something that is going to be found" (ibid). From this viewpoint, visual arts implies that the seeker knows more than he or she can tell about the outcome of the search before embarking upon it. This is the case with children between the ages of five and seven when they are particularly creative artistically. Gardner (1973) shows that these children and artists share similar traits - they desire to "follow their own star" and are unconcerned as to whether or not their efforts meet

> ... cultural standards of worth or pictorial accuracy. Most important, they use art to grapple with basic philosophical ... issues, although in children it isn't a conscious process.

Both the artist-teacher and the child know more than they can tell, but the teacher is conscious that this is the case.

Robertson (1963), in her work with adolescent students, was struck by the power of certain themes and that even those students with less imaginative potential possessed the ability to produce creative imagery "if only one could tap" these sources - a kernel element in the visual arts teacher's practical knowledge. Robertson describes her technique for achieving this goal by saying that she directed imagery by questioning but never required that her students answer her in words. "In this way," she says, "each child could build up his own image without being distracted by other people's ideas." Wilson and Wilson (1982) advocate a similar approach and, thereby, indicate a major element in the art teacher's practical knowledge.

The teacher works with the tacit dimension of practical knowledge and leads the student to the same mode of operation. The teacher gives the student "a non-verbal means of organizing ideas" (McFee, 1961) so that, for children whose verbal ability has been inhibited, visual symbols are an important means of communication: "Art, like language and religion, is a cultivation of human experience" (ibid). Symbols, according to Howard Gardner (1976), are the shorthand version of experience. In other words, the practical knowledge of the visual Arts teacher is centered on outcomes that indicate a tacit awareness of another, and larger, body of personal knowledge. Einstein (in Ghiselin, 1952), in a letter to Jacques Hadamard, implied that his practical knowledge hinged on the tacit but words

> ... as they are written or spoken, do not seem to play any role in my mechanism of thought. The psychical entities which seem to serve as elements in thought are ... more or less clear images which can be voluntarily reproduced and combined ... . Conventional words have to be sought laboriously.

Seemingly, the practical knowledge of scientists and artists is grounded in personal knowledge.

Elsewhere, the present authors have shown that the specific practical knowledge of visual arts teachers, while it is grounded on their own experiences as school students, should be trained as follows:

- in general education in the humanities, sciences, and social sciences;
- in the practice and theory of teaching, including Arts education; and
- in the Arts.

This specifically applies at the elementary level where most visual arts teachers are generalists.

CONCLUSION

The nature of "knowledge" is often misunderstood. Until the end of the nineteenth century, when humanity and the cosmos was viewed as operating like a machine, knowledge was thought to be absolute: it was thought that there were "natural laws" that all had to obey. The Einsteinian revolution, however, has shown that this view is false. Rather, we each have our perspective on events and, provided that this is rational, then knowledge results. Contemporary knowledge, therefore, is not absolute. It is relative to the individual. There are also different kinds of knowledge, one of the most important being "practical knowledge": the kind of knowing necessary to operate in practical circumstances - like teaching.

Teachers are autonomous and active agents in classrooms. There, they have a practical knowledge (about the students and the context) possessed by no one else. Partially tacit and partially explicit, it is embodied in teachers as persons and embedded in culture; it is also based on narrative unity - the teacher's living out of his/her story from life to death that interlocks with the narrative of others. This practical knowledge affects teachers in their perceptions, their interpretations, and their response to classroom events (Clandinin, 1983). Too often, however, teachers do not know that they possess such knowledge. Rather, because "know-how" is often tacit, it is not regarded as "knowledge" at all.

Arts teachers have practical knowledge, part of which is like that of all teachers, and part is unique. However, in our age of expanding technology the Arts can be regarded as "a frill", as they were when life and the universe were viewed as a machine. In the mechanist's view, the Arts are not "useful" and, therefore, should only enter education as entertainment. The Arts in society have not recovered from the low priority they received in the previous centuries. As a result, the image that Arts teachers have of themselves is attacked and not only do they lose confidence but they can assume that their practical knowledge is insignificant. This insidious situation is, fortunately, undergoing change as a result of the Einsteinian revolution. However, this is a slow process and it will be some time before Arts teachers come to truly value the practical knowledge that is inherently theirs.

We have seen that there is little direct literature about the practical knowledge of Arts teachers. But we have been able to infer the following about those who teach at the elementary level:

1 Like all teachers, they have their own practical knowledge, with both tacit and explicit dimensions, that is embodied in them as persons and has narrative unity.

2 They share aspects of practical knowledge with other elementary teachers yet, at the same time, they have aspects that are unique to teachers of the Arts.

3 As generalists, the grounding for their practical knowledge is limited to their own experience as students and to their severely restricted pre-service Arts training.

4 Their practical knowledge is based on the particular and the concrete in the Arts, and their skills as teachers and as artists.

5 They set up shared experiences with students through the challenge of their negotiations. Through teacher intervention, the students are responsible for choices and judgements - thus their aesthetic experiences become significant and intense. Arts teachers commit others to work: to pay attention and be personally involved in learning.

6 They relate as teachers to students through dialogue so that both have a deeper knowledge of what it is to be human, as well as the past, present, and future of the society in which they live. They relate as teacher-artist to student-artist at the tacit level so that the intuitive is expressed.

7 In terms of creative teaching, they have:

- the drive to want to do it;
- the feed-back to satisfy the having done it;
- the content of the doing of it;
- the signals to communicate during the doing; and
- the rituals of going about it.

8 Practical knowledge differs between one Arts teacher and the next. Just as in the contemporary world there is a plurality of philosophies about the Arts and Arts education, and a plurality of approaches and methods, so there is a plurality of practical knowledge.

We have also been able to infer that, if elementary Arts teachers are to improve their practical knowledge, they should:

- improve their own intrinsic, extrinsic, and aesthetic knowledge and learning, and engage in teacher self-renewal;
- enhance the intuitive and the feelingful in the Arts;
- allow for diverse experiential outcomes;
- assume a catalytic instructional role;
- improve their skills of:
  - integration
  - program and curriculum development
  - initiation, facilitation and guidance of appropriate Arts action in the classroom
- use the creative, the spontaneous, the innovative, and the entire environment in their methods;
- ensure that there is congruence between the methods and aims of instruction.

In this and the previous chapter we have surveyed the research literature on personal and practical knowledge and have made inferences about the practical knowledge of elementary teachers. We have specifically not reviewed the literature on how to inquire into that practical knowledge. This we must leave until Chapter 5 which deals with the methodology of the present study.

CHAPTER 4

INTUITION AND ARTS TEACHERS

Both artists and creative Arts teachers at the elementary level claim a predominance of intuition in their thinking. Both explicitly and implicitly, the touchstone for their discourse about art, how they teach, and how students learn, is intuitive.

If there is only a small body of literature that refers to the practical knowledge of Arts teachers, there is even less about their attitude to intuition. But we need to ask: How does intuition relate to practical knowledge?

At first glance, it appears that the intuitive is an aspect of personal knowledge, that it is a tacit aspect of practical knowledge. While in general this is true, the nature of the intuitive is highly complex. An examination of what little literature there is will amplify our understanding of the practical knowledge of Arts teachers.

CONFUSIONS ABOUT INTUITION

In common-sense terms, the major confusions facing the use of intuition in education are two: those of creative Arts teachers, and those of teachers who do not use the Arts in their classrooms.

TEACHERS OF THE CREATIVE ARTS

Picasso said, "Art IS." Similarly, the normal teacher of creative Arts in the classroom is inclined not to give much credence to empirical or rational statements about the activity. This is particularly the case with valuing. What is valued, "is". However much discussion takes place about the value of this painting when compared to that, in the final analysis the issue often comes down to intuition. This may not be the case with those teachers who emphasize Arts appreciation. But those engaged in creating the Arts, it is said, "just know" what is of value and what is not.

This attitude is evidenced in the massive literature from the voluntary associations in Arts education, and echoed by statements in conferences and public meetings. They say: artists engage in intuitive rather than reasoned thinking; and it is their practice (their skills in creating art) that makes this intuition valid.

In other words, normal creative Arts teachers indirectly claim that it is their practical knowledge of the Arts that provides them with their unique perspective. Although this argument may provide them with difficulty when they argue with others for educational priorities, and they may have some disagreements with authorities in the literature, the position they take has bearing on this study: it rests on the validity of their practical knowledge.

Yet it does so in a particular way. For them, "intuition" would be regarded as a tacit component of practical knowledge. It is upon this that they rest their case. In contrast to many other teachers, those in the creative Arts do not regard explicit knowledge of great significance to the practice in their field. To them, the skills of creating art are not necessarily explicit; discussing art in words is not thought particularly helpful in composing music or painting a picture. What is important in these activities, they say, is intuition.

As we shall see, although there is some truth in this notion, it is not the total story by any means.

NON-ARTS TEACHERS

Yet it is also fair to state that many modern non-Arts teachers and educators have also been confused about intuition. Some have ignored it. Others have treated it contemptuously or denounced it as merely imprecise thinking. In so doing

> ... educators avoid a process that has been credited with producing some of the most important advances in the sciences and that has contributed immeasurably to the Arts and humanities. Ignoring the potential benefits of intuition also cuts off educators from one of the most exciting and least explored areas of learning in children and adults. (Noddings and Shore, 1984)

Much has been due to the difficulty in grasping the nature of intuition in the common mind-sets of contemporary thinking. After all, it is difficult to measure such things as intuition. To those who believe, with Watson, Skinner, and other mechanical thinkers, that all can be accounted for through input/output, or that assessment of learning must be matched with behavioural objectives, intuition is an ambiguous paradox. But because it is difficult to grasp is no reason to ignore it.

BACKGROUND TO INTUITION

Intuition is an innate grasping by the mind. It happens immediately as a direct insight and is accompanied by the feeling of being "just right". The kind of knowledge it produces is unique: it occurs without reasoning; and we say on such occasions that we "just know". It is, therefore, a kind of knowledge that relates to belief: it seems to fit our tacit knowledge, to confirm what we already knew but did not know that we knew. When we have achieved this kind of knowledge, we cannot always explain it in words: it is related to personal knowing. Indeed, when we try to make it explicit, we often find that the words we use change it in some way.

It is, thus, a highly significant factor in human thinking. This is indicated by the high regard in which it has been held throughout history.

HISTORICAL BACKGROUND

Ancient communities held the intuitions of seers and oracles in awe and reverence. The classical Greeks and Romans generally considered that both intuitive and rational knowledge were valid: Pythagoras and the followers of Dionysis emphasized the first while Plato stressed the second; Aristotle, however, said that reason was based on intuition. Although both Augustine and Aquinas believed in non-rational revelation, Christianity's claim to ultimate truth, together with the rise of rational empiricism in the Renaissance, led to a lower value for intuition. The mechanism that resulted from Descartes and Newton continued the process.

It was not until Kant that intuition as a way of knowing began to be acknowledged once more. For him, intuition was a necessary part of sense perception, the basis of mental process. Rousseau said that children should be encouraged to act on their intuitions and not be stifled by rigorous instruction - the basis for romantic thought to the present day (including that of A.S. Neill, Herbert Read, and Peter Slade). After Kant, Schleiermacher created an all-inclusive theory of intuition and knowledge that included four types of wisdom: self-intuition, intuition of the environment, aesthetic intuition, and philosophic speculation. Although intuition was highly regarded by nineteenth century writers and artists (Goethe, Schiller, Wordsworth, Coleridge, etc.), and it became the basis of the educational methodologies of Froebel, Pestalozzi and others, it was still not the predominant view. It was even dismissed by the empiricism of the Utilitarians, Bentham and Mill.

It was with the Einsteinian revolution at the beginning of this century that intuition became highly regarded once more by major thinkers. Philosophers as diverse as Bergson, Croce, Husserl, Whitehead, Heidegger, Fink, and Gadamer have all been deeply concerned with intuition. It has been the basis of the work of Marshall McLuhan and Buckminster Fuller.

PSYCHOLOGY

Psychologists have a variety of views about intuition. For Jung earlier in the century, intuition was the way we orient ourselves to the future. He also considered that there were four common ways to learn, based on four types of learners: feelers, thinkers, sensors, and intuitors - which is similar to the work of Kolb (see p. 43). In contrast, Freud used the term "instinct" to indicate how we adjust to the past. From the Gestalt viewpoint, Wertheimer (1945) said that intuition was the spontaneous and non-rational understanding of the deep structure of a problem, which he illustrated by his interview with Einstein.

Eric Berne describes "the intuitive mood", a state where intuitive thinking is encouraged, thus,

> The intuitive mood is enhanced by an attitude of alertness and receptiveness without actively directed participation of the perceptive ego. It is attained more easily with practice, it is fatiguable and fatiguing. Intuitions in different fields do not seem to interfere with one another. Intuitions are not all dependent upon extensive past experience in the given field. Extraneous physical stimuli, both external and internal, appear to be irrelevant. (1977)

Berne studied intuition empirically and found that:

1 it functions as a series of perceptive processes working in an integrated fashion;
2 what is intuited is different from what the intuiter verbalizes as his intuition;
3 it works both above and below the level of consciousness in an integrated fashion, with shifting emphases according to prevailing conditions;
4 it may be more important than is often admitted in influencing judgements about reality in everyday life.

In educational psychology, intuition is not often related to learning. Piaget, for example, does not concern himself with it to any great degree. Yet when he says that we "know" the world in terms of "our actions upon it rather than relations among objects" (1962), intuition is implied. Jerome Bruner (1976) identified two kinds of intuition in mathematics: "informed guessing" (hypothesis), and the ability to solve a problem without formal proof. Elsewhere he writes:

> Intuition implies the act of grasping the meaning or significance or structure of a problem without explicit reliance on the analytic apparatus of one's craft. (1966)

QUALITIES OF INTUITION

Given this background, we need to ask: what are the qualities of intuition that specifically affect the practical knowledge of elementary Arts teachers?

INTUITION AND MIND

Intuition appears not to be a linear, causal activity. Rather, contemporary research shows it to be related to mental clustering: notions are "lumped" in the right hemisphere (compared with "splitting" that occurs in the left). Intuitive "lumping" relates complex symbolic activities, and this brings about "a kind of internal dialogue between whole and parts, between image and sequence" (Rico and Claggett, 1980).

This relates to the views of Buber and gestaltists. Intuition grasps the whole of a circumstance because of its image-making power. It makes rapid and complex syntheses using combinations, amalgamations and generalizations of imagery; these are based on similarities rather than oppositions - unifying mental processes rather than digital operations. In other words, intuition works in an aesthetic mode: it uses rich associative patterns and is based on feeling; at the same time, however, it both recognizes and interprets emotional cues, together with forming a basis for deduction through hypothesis. Where it differs from sequential cognition is that intuition perceives qualitative relationships.

Of the many examples of intuitive thinking amongst scientists and artists (Ghiselin, 1952), that of Einstein is perhaps the most revealing. He used intuition as related to visual imagination for many of his discoveries: for his theory of light, he imagined what a light wave would look like to an observer riding along with it; his theory of general relativity was based on the image of a man in a falling elevator; and his curved four-dimensional space-time continuum he envisaged as a suspended rubber sheet stretched taut, but distorted wherever heavy objects (like stars and galaxies) were placed upon it. Intuition and imagination are closely allied.

INTUITION AND COMMUNICATION

Human communication is a complex process. As Hofstadter (1979) shows, everyone is a product of a different set of circumstances and, as a result, misunderstandings abound. Yet on the other hand, a communication by an obscure poet of the fifteenth century can provoke a wealth of meaning in a great many people. Hofstadter's conclusions are: partial isomorphism is possible between people "whose style of thinking is similar"; and, although people differ in trivial ways, all are the same in important ones (ibid).

Using examples of translations from one language to another, Hofstadter shows that global and holistic meanings can be communicated if the local, and specifically cultural, meanings are re-phrased into the second language. Some metaphors and symbols are shared by all; but some are approximations based on similar experiences (ibid). Decoding a written language cannot be matched line by line if it is to carry metaphoric and symbolic meaning.

This is particularly the case with intuitive thinking. As intuition is a personal and largely unconscious activity, and operates by "lumping" of images, it does not communicate on a one-to-one basis. Nor does communication happen merely through partial isomorphism. It operates tacitly rather than explicitly and thus, in order to be communicated, must be translated into the personal and tacit levels of the receivers. As Hofstadter shows elsewhere (ibid: Fig.43), information from modern studies in DNA shows that there are genetic structural patterns for the process of "dialogue" as envisaged by Buber.

This has particular significance for Arts educators. Intuitions cannot be the subject of direct instruction: of the lecture method of presentation. Rather, they are communicated indirectly from teacher to student at the personal and tacit level. This is most likely to occur through the process of "dialogue" rather than digital or dialectic processes. If, as Robert Witkin (1985) says, Arts teachers are concerned with the way in which "expressive form realizes and articulates qualitative feelings" which "demands objectivity", then they must engage the intuitions of their students in a genuine dialogue.

THE FAMILIAR

Positivists and behaviourists are inclined to argue against the existence of intuition at all. For them, it is merely a name applied to certain familiar happenings: if we have a great deal of knowledge, what seems difficult to others can seem easy to us; or, when we think so rapidly that we cannot retrace the steps of the process, we are liable to falsely use the label, intuition. In this view, teachers should concentrate upon the acquisition of information amongst their students and leave the unsavoury business of intuition alone.

However, it is not merely that familiarity helps intuition. In addition, "intuition is essential to the development of familiarity" (Noddings and Shore, 1984). In problem solving, for example, the first thing is to see that a problem exists. The initial steps of learning and creation (such as problem identification) hinge upon intuitive impulses that are aesthetic and are characterized by feeling. For example, Poincaré, discussing mathematical creation, says:

> Amongst the great numbers of combinations blindly formed by the subliminal self, almost all are without interest and without utility; but just for that reason they are also without effect upon the aesthetic sensibility. Consciousness will never know them; only certain ones are harmonious, and, consequently, at once useful and beautiful. They will be capable of touching this special sensibility of the geometer of which I have just spoken, and which, once aroused, will call our attention to them, and will bring them into consciousness. (Cited in Newman, 1956)

And it is not merely geometers that have such sensibility.

It is in this connection that we can see the significance to intuition of the aesthetic qualities outlined in Chapter 2. Intuition is deeply felt because it is grounded upon empathy and identification - on what Martin Buber calls the "I and Thou". It is based on a mutual dramatic relationship: on "putting myself in someone else's shoes", and understanding that "someone else puts themselves in my shoes". As a felt mutuality, or "dialogue", intuition is part of our intrinsic motivation: it is a fundamental way in which human beings operate with others and with the world.

Clearly, intuition is part of the aesthetic mode of thought. It works by association and metaphor, it is grounded in feeling, and it forms choice and judgement. But it is not the whole of aesthetic thinking. Rather, it is the springboard from which the aesthetic is activated.

Intuition is directly related to sense perception. We look, listen, taste, touch, and feel directly. We are in immediate contact with the environment. We do not frame these perceptions in the conceptual schemes of cognition, at least not initially. In the purely intuitive mode, checks are made between perception and concepts but we do not work mainly through concepts. Rather, we try out our perceptual information against the cognitive, yet we always return to the direct apprehension. The painter works with what he sees and with his paint, trying out cognitive frames, rejecting some, accepting some, and inventing others. When he is satisfied, the work is "just right". He does not need a cognitive explanation of what he is doing. His intuition is directly involved in his sensory awareness, his subjective response, and his need to discover and create meaning.

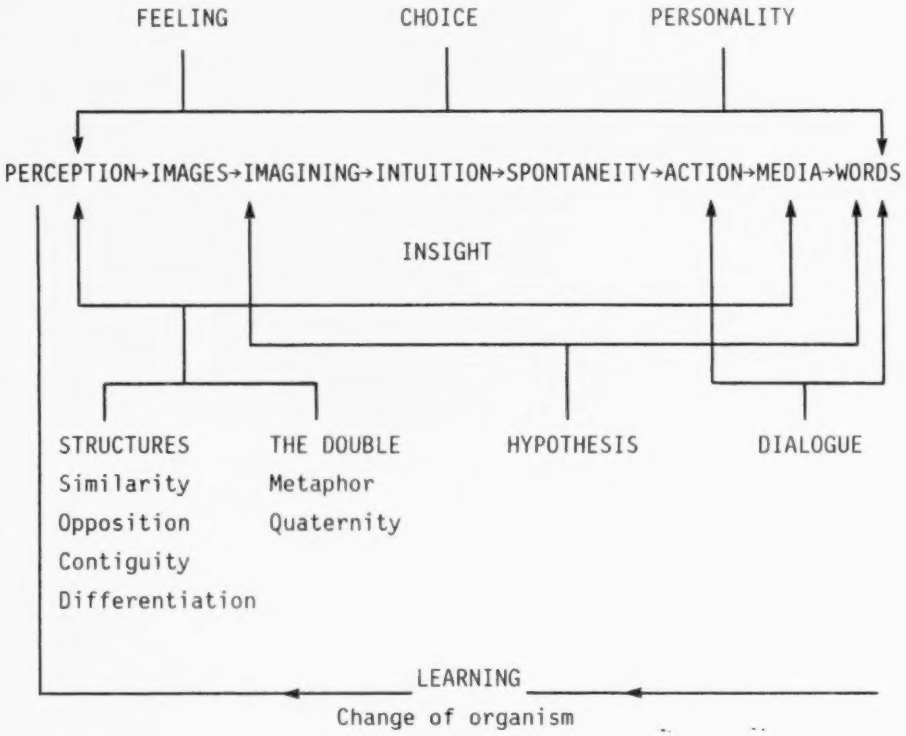
Intuition, then, is a necessary first step for creation to occur. Before the painter can act, he concentrates on his perception, on his understanding of the world around him. The human "need to know" commences from a receptive sensorium: the ability to think concretely, to have an inner response to the environment. This is empathetic: it is a two-way process (a "dialogue", or a dramatic act) between the external object and the inner self, generated by mind.

But because intuition is not primarily concerned with concepts does not mean that it is not intellectual. On the contrary, it is directed towards understanding, but in a particular form, insight. What is normally called cognitive (the conceptual) is to fit new information into categories; to achieve a result or a product. But intuition is not primarily concerned with categorization. It is concerned with direct understanding, with "grasping", with insight towards an uncertain end. This was what Einstein meant when he discussed his intuition as a scientist as a feeling of direction, of going straight towards something concrete.

It is here that spontaneity is added to intuition. If insight is direct understanding, then spontaneity, as Moreno (1946, 1959) said, "is the readiness to act". Spontaneity involves the loosening of normal constrictions, the opening of possibilities, the ability to go in the direction that "feels right". Where insight is more internal, spontaneity is directed towards action.

We can, therefore, add to what was said about the aesthetic in Chapter 2. Aesthetic activity has two focuses:

1. the internal: the intuitive to gain insight; and
2. the spontaneous: which prepares us for action. Together they make up intuition, the necessary precondition of creativity. This is illustrated in Figure 2, below:



INTUITION AND THE AESTHETIC
Figure 2

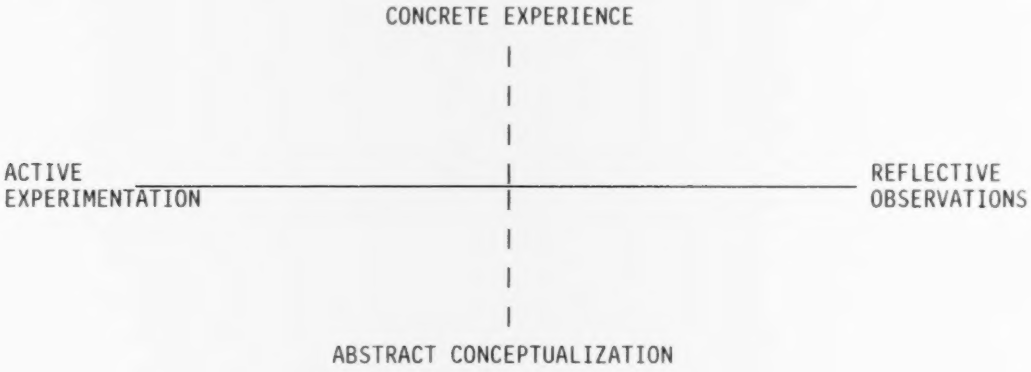
INTUITION AND EDUCATION

What types of strategies in intuition should be part of the practical knowledge of the Arts teacher? A previous study has examined related issues for Arts teachers in elementary schools (Courtney and Park, 1980) while Noddings and Shore (1984) have reviewed the research and put forward an all-inclusive theory. Various other studies (such as those indicated below) have examined tangential issues.

TEACHERS AND INTUITION

All teachers, not just those in the Arts, need to use intuition in their classes. As Rico and Claggett (1980) say, "The best teachers seem naturally to provide their students with images to give them a holistic framework into which the details will fit as they are delineated." In other words, good teachers use intuition when they encourage such factors as metaphors, puns, paradoxes, and other ambiguities which serve to unify and enrich their students' experience.

Teachers know more about their intuition if they can identify their own learning style. If they do so, they have a better chance of identifying the intuitive learning styles of their students. Hunt (1985) has shown that learning styles vary on the dimensions concrete/abstract, active/reflective, theoretical/practical, systematic/intuitive, individual/group, self-directed/teacher-directed, personal/objective; and according to factors such as auditory, visual, temperature, tactile, time, etc. In workshops with teachers, he has used the Kolb Learning Style Inventory (1976) which is based on the two dimensions - concrete/abstract and active/reflective - as follows:



DIMENSIONS OF KOLB'S LEARNING STYLE INVENTORY
Figure 3

Teachers made an intuitive self-assessment and placed themselves in one of the four quadrants. Thereafter, they conducted experiments to see if these were accurate. From exercises such as this, teachers can apply their own learning styles to classrooms (Hunt, 1982).

Kolb's inventory helped discover four kinds of learners: divergers, assimilators, convergers and accommodators. Others have used it in a variety of ways (e.g., McCarthy, 1981). But only Hunt's research has related teachers' and students' intuitions in ways that reveal practical knowledge.

ARTS TEACHERS AND INTUITION

Even Arts teachers do not always recognize the intuitive workings of their students. Few teachers have thought deeply about intuition and even fewer have discussed it with their students.

Teachers of writing need to acknowledge intuition as "the culmination of perceptions that we accumulate, internalize and synthesize into patterns" (Soven, 1979). Writing skills, at least at the elementary level, are based on invention, accurate observation, and visual forms - all fundamental to intuition. Similarly, teachers of visual arts can use methods of "encouraging the inner eye" (Rico and Claggett, 1980): framing, colouring, centring, shaping, clustering, the use of mandalas, etc.

Several studies (Gardner, 1983; Seaberg and Zinsmaster, 1972) show that theatre directors rely on intuition for their choice and treatment of dramatic material. All of the theatre, film, and television directors who were interviewed told Gardner this. Indeed, many resist cognitive analysis in such tasks. Rather, they tend to visualize or hear the work "as if" it were being performed and this they balance with those items that only emerge during rehearsals. In other words, they envisage themselves working intuitively, based on their experience and skills; simultaneously they allow each individual artist to reach his or her own potential through intuition, interpersonal relations, and skills. Using this model, Seaberg and Zinsmaster can say:

> Scientific studies have not carried us very far in the improvement of teaching. Perhaps it is time in teacher education to stress intuition, the artist's sixth sense. The aesthetics of teaching have barely been studied and may prove fruitful in further investigation.

They go on to suggest that intuition can be used by teachers to:

a) assess the effectiveness of materials;
b) assess and develop the quality of inter-personal relations;
c) modify materials and plans;
d) allow the emergence of individual performances within a whole;
e) work within a framework;
f) develop a sense of rhythm and flow;
g) increase imagination, enthusiasm, and commitment;
h) use the whole Self as an instrument of teaching;
i) develop "educated guesses" (intuitive hypotheses).

There have also been studies in music education that address intuition (Bamberger, 1975, 1979; Lampert, 1984). By training teachers to recognize intuitive knowledge, Bamberger shows that they build a store of common sense information from personal experimentation in the physical environment. The framework she used with music teachers was the following:

a) How are the child's intuitive descriptions different from those formal descriptions accepted as norms in the school setting?

b) What is the nature of the mismatch?

c) How can the teacher help the child to integrate his or her intuitive knowing with scholastic expectations?

Bamberger's experiments had the following results on music teachers' thinking:

a) They expanded their ideas about knowing something (including what the knowers figured out for themselves).

b) They were more aware of their thinking processes and their ability to "figure things out".

c) They recognized the differences between the formal and intuitive modes of knowing.

d) They found difficulty in accepting that the two forms of knowing (at c) could be integrated. (What is the relation of intuitive answers and "the right answers?" Are "the right answers" right? Are these important? What does it mean for teachers and students to know something if they do not understand it?) Further, Bamberger discovered that the teachers' own "stories" of what happened in classrooms show that they were well able to work out alternative strategies which eliminated choosing between the two forms of knowing. That is to say, although they did not have the language for what they did intuitively, they knew more than they could say.

Bamberger's research does not appear to have been replicated in any other Arts education field. Clearly, however, it can play an important part in our understanding of intuition in the practical knowledge of Arts teachers.

INTUITION AND PRACTICAL KNOWLEDGE

From the above discussion of the literature, we review below the basic aspects, identified in the literature, of intuition within an Arts teacher's practical knowledge:

1 "Having a fresh vision", even on old material, should be encouraged if the intuitive mode is to be improved. This includes: the teacher's acceptance of the strange and unfamiliar as well as the acknowledgement that the student may find intuition difficult on one day but not on the next. It also involves encouraging students to try, to take risks, and to be brave enough to work in a "different" way.

2 Warming-up exercises help. Although common in spontaneous creative drama, they are not used as frequently by teachers who work with other art forms.

3 A warm atmosphere and a pleasant place to work encourage intuition. Statements from artists (Ghiselin, 1952) clearly show that such an environment is most helpful.

4 The trivial should be avoided. Students respond intuitively to the major issues they confront in their lives. This can only occur when the teacher is a model of genuine commitment to a task, seeing the task through because it is deeply felt.

5 Obstacles must be overcome and routines that *permit intuition should be developed.* Students should face genuine issues that require problem identification prior to problem solving. Procedures should be developed that help intuition grow, but they must never become ends in themselves.

6 The teacher must engage in a genuine human interaction with the student: honest, open, and sincere. This includes ensuring that each student faces the issue of identifying a problem. Contemporary research shows that little purpose is served if the teacher identifies problems which students then solve.

7 Students must make the key decisions in a classroom. Intuition is about choice and responsibility. Thus, for example, in spontaneous improvisation, the first question Dorothy Heathcote asks of a new group is, "Will the play be about past, present, or future?" (Johnson and O'Neill, 1984) Immediately the onus is placed upon the students. These types of questions provide multiple pathways and students should be free to choose which they will take. In a similar way, story telling with very young children can be presented for their open choice, thus,

> Once upon a time there was a ... . Yes, there was a mouse. What was its name? ... Yes, it was Peter. Well, one day, Peter was walking down the road. What do you think he saw? ... . Yes, he saw a gate. It was a big white gate with ... .
> (Adapted from: Slade, 1954)

Intuitive understanding amongst children comes from overt behaviour - helping to tell a story or making decisions about a created play - and not by verbal explanations about actions.

8 Having clearly defined "behavioural objectives" does not necessarily allow the teacher to operate in such a way. Intuition is best encouraged if as many options as possible are open - for teachers as well as students.

9 Students should directly engage their perceptions and intuitions: the ways in which they are aware of the world and their inner operations. Teachers can encourage these by the use of immediate experience; presenting materials in a variety of media (pictorial in music, poetry in dance, etc.); challenge, debate, and providing new perspectives; the use of images and metaphors; the use of different media to express the same intuition; small group work and considering the work of peers; and in other ways reviewed above.

10 Identifying the students own needs, concerns, and interests. "Start from where they are," says Brian Way (1967). Understanding can only be built upon previous understandings and, when this occurs, the students' own purposes and goals can be satisfied.

11 Allowing time. Intuition does not obey the time slots of school bells; nor is its pace the same with everyone. Thus,

> To slow down the pace is not necessarily to teach and learn less. Delight, humour, contemplation and sharing are ... parts of an education that takes intuition seriously. (Noddings and Shore, 1984)

Clearly there is a close relationship between intuition and imagination, empathy, and tacit knowing. All are linked in the practical knowledge of elementary Arts teachers.

CONCLUSION

This chapter has surveyed the research literature in an attempt to relate the tacit (as in Chapter 2) within the practical knowledge of elementary Arts teachers (as in Chapter 3) to intuition. This has been necessary because many creative Arts teachers use the intuitive to claim validity for their work. It will be observed that this has not altered the thrust of the previous chapters but has, in fact, provided a deeper understanding of some of the issues raised.

CHAPTER 5

METHODOLOGY

The main aims of the study were to discover:

1 the practical, personal and intuitive knowledge by which good elementary Arts teachers are guided; and
2 the body of beliefs that is transmitted in the profession.

We have, in previous chapters, examined the research literature that refers to these aims. Now we must turn to the ways in which this inquiry was conducted.

The reader, however, requires some background. Why choose one methodology over another? What is there about the aims of the study that makes one method more appropriate than another? In order to answer these questions, this chapter has the following sections:

1 General issues about research in Arts education.
2 Research methods in practical knowledge.
3 The research methodology of this study.

RESEARCH AND ARTS EDUCATION

Controversy has raged for the last twenty years or more about suitable research methods in Arts education. A brief discussion of this debate is in order.

EDUCATIONAL RESEARCH

During the first half of this century, virtually all educational research was mechanical. That is to say, it was quantitative: it used measurement instruments to "prove" that such and such was the case. It was largely based on existing deductive methods in physics and, in education, was known popularly as "objective", or "hard" research, or "number crunching".

Today there are three major styles of quantitative research methods:

1 Causal-Comparative.
This deduces causes for a particular behaviour pattern by comparing:

a) subjects in whom this pattern is present, with
b) similar subjects in whom it is absent.

2 Correlative.
This discovers or clarifies relationships through the use of correlation coefficients - a statistical device.

3 Experimental.
This, the most rigorous method, often includes the other two. It manipulates one variable and observes its effect on another.

Empirical methods are now viewed as suitable for questions within a stimulus-response causality, e.g., "Does X directly cause Y?" (Tyler, 1950; Bloom et al., 1970; Popham, 1969).

Those who advocate "hard" methodologies usually also accept some other approaches. Surveys, which are also based on quantification and statistics, are accepted. "The historical method", in addition, may well be accepted.

However, quantitative and related methods of inquiry cannot answer all the educational questions raised. The answer of some "number crunchers" to this is: if it cannot be answered by empirical and related methods, then a question cannot be answered accurately. A "proper" research method, they say, should be objective and not based on assumptions.

There are problems with the position of some mechanists. First, deduction itself is based on an assumption: the classical syllogism (see Chapter 2) begins with an assumption (e.g., "all men are mortal"). Second, contemporary physics has gone beyond mechanical methods of inquiry. In particular, Heisenberg's theory of indeterminacy (see Chapter 2), upon which quantum physics and other modern sciences are based, shows that the observer is part of the experiment: e.g., that no inquiry can ever be "objective" in the sense that the human viewpoint can be removed. Third, contemporary logic (see Chapter 2) shows that there are two kinds of objectivity: the empirical and the rational.

As a result, a different kind of research methodology - the qualitative - has been used increasingly in the social sciences and education (Bogdan, 1975; Bogdan and Biklen, 1982; Peavey, 1985). Qualitative research is specifically rational, acknowledges the perspective of the inquirer, and can use a variety of styles:

1 Phenomenology
Husserl developed phenomenology to describe consciousness as we experience it. He "put into brackets" any commentary about it and tried to find its basic structure as we live through experience: it assumes that reality is socially constructed (Berger and Luckman, 1966) and that we each negotiate the "meaning" of existence. (This resembles the Spolin method of improvisation [Spolin, 1964; Bernstein, 1985] which requires immediate response with no "playwriting".) Techniques include observation, interviews, theme analysis, diaries, structural interpretations, etc. (Barrell and Barrell, 1975; Colaizzi, in Valle and King, 1978: 48-71; Giorgi, 1970; Keen, 1977).

2 Grounded Theory

This builds ("grounds") theory on data collected from unstructured interviews of "experts" and other sources. Based on the work of Glaser and Strauss (1967, 1978, 1979), it begins with no hypothesis but searches the data for themes, and then for the emergent theory that arises from the themes. There have been several variants of this method (e.g., Anderson, 1982; Courtney and Park, 1980; Courtney, Booth, Emerson and Kuzmich, 1985).

3 Participant Observation

This is the observation of others by someone who participates in their activity; the observer sees if people "mean what they say and say what they mean" (Spradley, 1980; but also Levine et al., 1980; Lofland, 1971; McCall and Simmons, 1969; Whyte, 1979).

4 Critical Incident

The focus is on critical incidents of special significance: the act's intention must be clearly observable, and its consequences must be definite enough to allow analysis and interpretation (Fivars, 1980).

5 Case Study

This examines in depth a single person/group/process/community/organization, etc., and can be either quantitative or qualitative (Shaffir, 1980).

6 Responsive Methods

Developed by Stake (1975) and others, these are used to evaluate educational programs. The observer remains responsive to each group involved (students, teachers, administrators, parents) and continually assesses both their needs and the actions necessary to satisfy these needs.

The increasing use of qualitative methods in educational research shows not only the need for them but also their flexibility. Provided they are answerable to reason, they give a valid perspective that is of practical use.

RESEARCH IN ARTS EDUCATION

Until the mid-1960s, most research in Arts education was empirical. It was found to be reasonably accurate in causal terms but it had less use in Arts education than it had in some other school program areas. For example, many of the issues raised in the Arts were simultaneously complex and subtle; as a result, they were liable to be missed by the rather gross techniques of quantitative approaches.

In recent years, various research methods have been used to examine issues in Arts education. The validity of a research method depends on what question it attempts to answer. If, for example, we wish to know if X causes Z in music education, then some kind of empiricism may be best. But if, in contrast, we wish to know something about the values of a group of music teachers a qualitative method may be best. Both methods use observation and inference. But quantitative inference depends on the logic of enumeration of observed characteristics, while qualitative inference depends on the logic of direct comparison of characteristics (Travers, in Willis, 1978).

The key issue is the question being asked. Yet, whatever the question, and however rigorously a method is applied, we should not expect too much of research in Arts education. This is because: in any human study, not everything is measurable; explicit behaviour can sometimes be measured but the implicit can rarely be quantified; measurement is less successful than qualitative methods in evaluation of Arts programs (Stake, 1975); and Arts education research can be distorted if a priori hypotheses are used because values can slip between predetermined categories. The research question of this study is best addressed by a qualitative approach that provides a rational and objective view of the issues.

METHODOLOGIES IN PRACTICAL KNOWLEDGE

In order to capture the nature of the practical knowledge of elementary Arts teachers, this study had to accomplish the following tasks:

1 to survey the methodologies of previous research in practical knowledge; and based on this information
2 to design an appropriate methodology for the specific question, and subsequently to pilot it; and then
3 to apply a research instrument that was adequate and effective enough to elicit what we needed to know. We will examine these tasks in sequence.

SURVEY OF PREVIOUS STUDIES

Most previous research about practical knowledge is based on observations. The documentation of these then becomes the data for analysis. In other words, the HOW of inquiry has generally been qualitative.

Once surveyed, however, these studies revealed that the content sought for - the WHAT - varied with the assumptions and perspective of the researcher, which is altogether proper in an age that acknowledges Heisenberg's theory of indeterminacy. In other words, the particular perspective of the researcher was inherently part of the method.

In order to grasp previous studies in such a way that they would be of use for this inquiry, therefore, we proceeded on a task analysis to provide:

1 a display of research techniques;
2 a display of styles of content;
3 an analysis of those items that related to the present study.

TECHNIQUES

Virtually all studies used direct observation although the style of data collection varied considerably. For example: Connelly and Clandinin (1983) used a qualitative case study; some had an emphasis that was phenomenological-structural (Elbaz, 1983) while others mixed various phenomenological styles with the emergent process of grounded theory; in contrast, Curtis (Curtis and Mays, 1978) approached observation from philosophical phenomenology. Some studies used participant observation and interviews (Clandinin, 1983). Many closely documented the diaries and notes of the observer/interviewer, some in one style, some in another. Pinar (1975) detailed a questionnaire. Of the studies identified, only those tangential to practical knowledge (e.g. Leirman, 1970) used quantitative approaches. Thus the display reads as in Figure 4 below.

Methods	TECHNIQUES
phenomenology	observations
grounded theory	interviews
case study	researchers' diaries
	participant observation
	structural interpretation
	theme analysis
	emergents
	questionnaires

METHODS AND TECHNIQUES OF PREVIOUS STUDIES

Figure 4

CONTENT

The perspective of a researcher provides the type of content observed, documented and analysed. The nature of these perspectives vary: (A) by category; and (B) by signifiers.

A. BY CATEGORY

Perspectives vary by the categories used. All researchers categorize elements of practical knowledge yet consider these categories are integrated by the individual teacher in terms of personal values and beliefs as oriented to each practical situation. These categories are of six kinds:

1 By Ways of Knowing

All research studies assume that practical knowledge:

- includes both tacit and explicit knowledge;
- has rules brought about by information selection and inference; and
- has a psychological model of reality that enables teachers to make decisions with reasonable accuracy.

2 By Skill

Some studies provide a whole list of detailed skills that together comprise practical knowledge (Farrar, 1983) while others (Courtney, Booth, Emerson, and Kuzmich, 1985) classify those of Arts teachers as teaching skills, Arts skills, and Arts teaching skills.

3 Views of teachers' theories and notions vary widely:

- constructs of curriculum, child development, and learning (Bussis, Chittenden, and Amarel, 1976);
- conceptions of student, teaching approaches, and learning outcomes (Hunt, 1976); and
- orientations to situation, person, society, experience, and theory (Elbaz, 1983).

Teachers' theories and notions are normally more in the style of "orientations" rather than full-scale philosophies: they are assertions and are not debatable (Connelly and Clandinin, 1983).

4 By Structure

Practical knowledge, according to Elbaz (1983), has three types of structure:

- categories of rules of practice;
- practical principles; and
- the images and metaphors used by teachers to describe events.

5 By Personality and Personal Narrative

Practical knowledge varies with the individual:

- according to the manner in which it is held and used - what Elbaz calls "cognitive style";
- and according to the person's own "narrative" - their existence-pattern between life and death (Clandinin, 1983).

Thus identifying biographical and historical elements of teachers' experience helps to reconstruct an understanding of their personal and practical knowledge. (Connelly and Clandinin, 1983)

6 By Context

Environment is crucial to personal knowledge and, thus, to practical knowledge (Connelly and Clandinin, 1983).

B. BY SIGNIFIERS

All research studies assume that observers can infer personal and practical knowledge (signifieds) from specific signifiers, e.g. (1) actions; (2) language. Views differ as to which signifiers reveal more or less of the signifieds of practical knowledge, actions or language.

1 By Actions

These are the signs of "minded practices". Actions in education signify practical knowledge:

- of teachers, through their use of rituals, rules, and principles;
- of schools, through their rhythms, rituals, habitual actions, and the making of curriculum materials (Connelly and Clandinin, 1983).

Teachers' actions are of two significant kinds:

a) Self-presentation

Self-presentation is to be the "double" of one's self and a role. In Chapter 2 we saw that the metaphoric nature of tacit and aesthetic thought becomes externalized in two kinds of action: those of the actual world, and those of the fictional (aesthetic) world, so that in our self-presentation we become (symbolically) "a costumed player". From this sign, an observer can infer aspects of the player's practical knowledge.

b) Ritual

Ritual is the performance of symbolic acts for an assumed effective purpose. The continual repetition of "minded bodily knowledge" becomes ritual: the reconfirmation of personal knowledge. The observer infers that a teacher's rituals re-affirm his/her tacit beliefs and assumptions grounded in a specific context. McLaren (1986) has analysed the rituals of teachers, schools, and students in detail.

From both self-presentation and ritual we can infer a teacher's practical knowledge.

2. By Linguistic Signs

Words or phrases, the signs of linguistic expression, communicate complex tacit meanings due to the unconscious operations of accumulated personal knowledge. Language manifests socially conditioned predispositions within practical knowledge (Barnes, 1976; Keddie, 1976; Esland, 1976) in a variety of ways, particularly:

a) Metaphors and Images

Images and metaphors are linguistic expressions of tacit levels of thought; within them, the individual creates meaning. When expressed, they are analogies of what is actual: fictionalized constructs which reflect our view of the world. They imply "2-in-1" meanings. When teachers use metaphors about the context of their teaching they are expressing two closely related meanings: the actual and the fictional.

From these, the observer can infer the tacit dimension of the teacher's practical knowledge: "the ultimate commitment is to (the) personal knowledge and not to the situation" and, thus, public and private life are irrevocably linked. Although the metaphor originated in the teacher's personal and private life, he or she comes to use it in terms of his or her professional life. Yet the observer cannot recover the total tacit meaning of the teacher from metaphors and images (Connelly and Clandinin, 1983).

Clandinin (1983) goes on to show that the images and metaphors linguistically expressed by teachers have emotional and moral dimensions within a total complexity of meaning. Yet they may be connected to a concrete incident and/or be specific in construction or meaning. Thus a teacher's expression, "I am not a policeman", is concrete and specific but, as Clandinin shows, it metaphorically highlights inappropriate teacher-student relationships.

Ways to record the style of metaphoric thought vary. Some researchers record them in writing. Rico and Claggett (1980) suggest visual forms: framing, colouring, centring, shaping, clustering, and the use of mandala forms. Courtney (1985a) uses a semiotic square of similarity/contiguity/opposition/differentiation so that metaphors can be plotted within the dynamics of contrast/conflict/complementarity.

b) Questioning

Additionally, other studies have indicated (Dillon, 1982a, 1982b; Farrar, 1983) that teachers' questioning reveals aspects of their practical knowledge. Thus, as we have seen in Chapter 3, Dorothy Heathcote's questions are in the context that she "really wants to know" - the form of questioning reflects her commitment to the existential life of the students.

The display indicating the content of previous studies is given in Figure 5 below:

CATEGORY	SIGNIFIER
PRACTICAL KNOWLEDGE	ACTION
Tacit/explicit	Self-presentation
Rules from inference	"the costumed player"
Models of reality	actual/fictional
	Ritual
SKILL	effective purpose
Teaching	re-affirmation
Arts	
Arts education	
	LINGUISTIC
NOTIONS	Metaphors/images
Various	analogies of actual
	basis: personal knowing
STRUCTURE	private/public
Rules of practice	emotional dimension
Practical principles	moral dimension
Metaphors/images	complex/concrete
	ways of recording
PERSONALITY	Questioning
Personal narrative	
CONTEXT	

CONTENT OF PREVIOUS STUDIES

Figure 5

PROCEDURES

We have seen that previous research studies concerned with practical knowledge have used various procedures which inform the present study. They include: (A) Observations; (B) Analyses; and (C) Questionnaires.

A Observations

Most studies use open-ended observations with as few parameters as are required to provide focus:

1 If the aim is to grasp the consciousness and personality of the teacher, the observer might consider if the teacher:
  - is conscious of what is going on;
  - understands meaning from what is going on;
  - understands from it what the students understand;
  - has beliefs about it;
  - verbalizes these beliefs;
  - desires what is going on;
  - chooses what is going on;
  - has reasons for desiring or choosing it;
  - has reasons that are valid (empirical or rational);
  - can explain what is going on in terms of causality.

2 If the aim is to elicit the teacher's interactional style, the researcher might ask the questions listed in Chapter 3.

3 Procedures between observer and teacher might include:
  - regarding teachers as persons;
  - developing the mutual inter-relationship of both;
  - ensuring that transcripts of observations and interviews are made available to the teachers concerned prior to the next interview.

B Analysis

A variety of techniques might be used to analyse the transcribed observations and data, including:

1 The inference of tacit knowledge from explicit and practical knowledge.

2 A distinction between:
  - rules and principles of practice;
  - metaphors and images used to describe practice;
  - cognitive style;
  - orientation to:
    - situation;
    - person(s);
    - society;

- experience;
- theory (see Chapter 3).

3 Elements of a teacher's experience might be reconstructed from parts of biographies which might provide background for observations.

4 An analysis of a teacher's flexibility might be given (see Chapter 3).

5 Analysis of self-presentation and use of metaphor might be made through:
° a distinction between actual/fictional;
° structure of similarity/contiguity/opposition/differentiation; and
° dynamics of contrast/conflict/complementarity.

6 Analysis of metaphor might be made through:
° framing;
° colouring;
° centring;
° shaping;
° clustering; and
° the use of mandala forms.

7 Attention might be given to the teacher's "life-world" and "world view".

C Questionnaires

Questionnaires might be prepared for teachers (see Chapter 3).

This background served to inform the methodology of the present study. To this we can now turn.

METHODOLOGY

This study was qualitative for reasons outlined at the begining of the chapter. The literature was surveyed (Chapters 2 - 4) and previous methods examined. A specific research tool for gathering data was developed (see Appendix 2) from studying previous methodologies relating to practical knowledge. This tool (guide) was not used as a questionnaire, rather its function was to serve to keep the study's main issues uppermost in the mind of the interviewer, who, in any one interview, would ask only those questions which were deemed important to that respondent and in that particular context.

A pilot study was conducted between September and November 1985, involving three cooperating teachers. Participants were chosen from systems other than the targeted school boards and on a voluntary and informal basis. The interviews proceeded according to plan except for one major difference. None of the three teachers was observed in the classroom.

Each participant in the pilot study was interviewed three times and an attempt was made to cover the ground indicated in the guide. Time was not as important a factor as it proved to be in the data collection phase of the study. In other words, much more time was spent initially on the three interviews than proved to be possible later on. Even so, it was soon apparent that not all of the material could be covered satisfactorily. Possible duplications, when they became apparent, were eventually avoided without distorting the main issues.

Participants in the pilot study were first contacted by telephone. However, it was found that a brief, preliminary discussion between researcher and project participant unaccompanied by recording equipment helped to explain the framework of the study and set the stage for relaxed informal discussions.

It was decided at the inception of the study to request the assistance of school boards which represented contrasting regions of Ontario and were demographically appropriate.

As a result of suggestions made in consultation with officers from various Ministry of Education centres, four school systems were invited to participate in this research study.

Regional proximity and comparative ease of travel were amongst the criteria discussed when deciding which school systems to approach. Initial contact was made through the directors of education and a synopsis of the letter (see Appendix 1) follows:

- The research sought "a better understanding of the practical knowledge of elementary teachers of the Arts" and it hoped to improve both the calibre of Arts teachers and the teaching of the Arts in Ontario.

The letter continued by requesting:

- that a liaison officer identify several Arts teachers who conduct exemplary elementary Arts programs and that this was to be corroborated by at least one other person in an administrative position;
- that permission be given for a research officer to visit the identified teachers on approximately five different occasions over several weeks, in order to conduct open-ended interviews and observe some classes.

The letter to the directors also stated that it was the task of the research officer to observe and discuss with the participating teachers, the key issues of the study, namely:

a The teacher's basic assumptions, attitudes, and beliefs in relation to: Arts education; his or her confidence and self esteem; possible disparities in his or her professional role, etc.

b The teacher's practical knowledge in the act of teaching: the nature of tacit/intuitive/implicit knowledge; its relation to explicit knowledge; strategies, the signs he/she believes indicate that his/her teaching "works"; use of abstraction vs. concrete; human attitudes; teaching style, etc.

c Practical knowledge in the use of structures: tacit/explicit thought in planning, use of rules and principles, etc.

d Images and metaphors used by the teacher that reveal practical knowledge.

e The teacher's degree of flexibility within the practical.

f Tacit/explicit levels of practical knowledge in relation to students; interactions, assessment, in judgement of Arts creativity, etc.

The letter continued with an explanation that the study called for the use of the grounded theory methodology and that the raw data would be collected, documented, and analysed so that, from the results, a general theory of the practical knowledge of elementary Arts teachers might be extrapolated. Strict confidentiality was assured to those participating in the study, and the letter concluded with the hope that the recipient would cooperate with what the co-researchers considered a "highly worthwhile study".

The final selection of the elementary Arts teachers who were identified by the authorities as conducting high profile Arts programs was left to the discretion of each individual school system involved.

The main data were collected between January and June 1986. Liaison personnel negotiated with the teachers concerned in the study, and lists of contact names, addresses, and telephone numbers were made available to the research officer. Initial contacts with the teachers were then made by telephone.

A brief verbal explanation of the study was often first met by the teachers with some hesitation. A brief meeting dispelled or alleviated most fears. These meetings generally concluded with mutual enthusiasm being expressed for the project by both parties.

Twenty-five Arts teachers were interviewed during the course of this project. An attempt was made to have a group of participants who represented the visual and performing arts in approximately equal proportions. Some taught more than one of the visual and performing arts. Every interview was audio-taped and transcribed as quickly as possible. The overall plan was to interview each teacher three times and observe in the classroom once. Transcriptions were typed and then checked word for word against the audio tapes by the research officer. Copies were then mailed or occasionally delivered to the participants before the next meeting.

Initial interviews often began on an historical note. It soon became apparent that certain particular events and/or people had influenced the study participants and had encouraged them to reach this particular place at this point in time. The first interviews often touched on many aspects of the study. It was usually evident which statements most needed clarification or additional explanation - and the second interview proceeded from a logical point of departure.

At the conclusion of the previous pilot study it had been determined that the three tape-recorded interviews should be conducted before proceeding with the classroom observation. By the end of the second round of interviews, it became apparent that a different strategy would be more effective. After a brief consultation amongst the research team, it was decided to reverse the last two meetings so that the classroom observations were followed by the last of the taped interviews. Had this not been altered, many important questions might have been left unanswered.

Classroom observations were not accompanied by audio-taped recordings but, rather, were documented with detailed field notes made by the researcher.

At the conclusion of all four meetings, each Arts teacher was sent a letter of appreciation for participating in the study.

CHAPTER 6

THE INVESTIGATION

> "Effective teaching is no longer considered to be merely a matter of training children in a variety of skills; ... but it is concerned with the intentional process of getting them to think for themselves.
> (Maxine Green in Smith, 1970)

It would seem improbable, at first, that a collection of individuals whose apparent sole commonality rests in the fact that they all teach the Arts in Ontario could possibly share even superficial similarities. Yet, it is in the area of similarities, rather than differences that these teachers stand out as a group.

Family interest and encouragement emerged immediately as an important influence in early childhood. Many of the teachers spoke enthusiastically of their ethnic roots where Arts activities played a major role. One participant in the study described her French background with verve and humour. It involved a great many "emotional family parties", with much singing and dancing. Group cohesion was encouraged within the auspices of interminable "chansons à réponse". Younger family members aspired to become song-leaders. The same teacher vividly recalled traditional tunes performed to improvisational dance steps. Another teacher told of the fact that although money was scarce in her childhood, it was spent willingly on books, concerts and music lessons. Latvian designs with their bright mathematical abstractions of nature adorned the household and provided very tangible memories of their Latvian roots.

Roots were also a very important part of growing up for another participant in this research study. Between the years of six and eighteen, this teacher spent her summers in Polish scouting. Her words are eloquent!

> It was that unity with nature, ... evening rituals around the campfire where we learned to sing hundreds of songs that gave my childhood so much richness. My summers were spent under the stars and we'd re-enact different Polish songs ... which included songs of mountaineers, love songs, songs of separation from loved ones, coquettish songs which dealt with jealousy and triangles - and then there were military songs (that) we used to march to down the roads ... .

For those children who had no knowledge of their Polish heritage it created an environment. The same teacher continues, "I experienced the Arts and they were very healing to me."

A teacher whose family background could be aptly said to be steeped in music, recalled similar camping experiences:

> I remember going on canoe trips through Algonquin Park and singing a lot of songs ... it was just a whole feeling of being in the Northland and the beauty of nature. We'd get up in the morning, recite and sing some things to the hills and to the lake and so on ... .

Arnstine (in Smith, 1970) described aesthetic experience as being, if not synonymous with true learning, certainly a kindred spirit. Early experiences which involved the senses are undoubtedly deeply embedded in the memory of this teacher:

> My early childhood was spent in Fiji. I have strong impressions of the sound of bees, lizards going up trees, the smell of flowers, striped snakes in the water, and seed cases on the beaches.

Another teacher whose early childhood was spent in a Northern mining community recalls it equally vividly, although she described it as being "deprived by contemporary standards, but rich in a way that had no price". She was given both room and time by her young parents to create. She was encouraged to use her imaginative powers. Yet another teacher's childhood memories involved a very early interest in art, dance, and movement, and a grandmother who did "a lot of fun things with me, like making things out of newspapers". He also recalled that:

> I loved coat hangers because I could twist them into all kinds of weird things ... sometimes I just hung things from them ... and, I was the only kid on the block perhaps that didn't have an electric train ... but I would do things like turn a whole section of the basement into an environment for this wind-up train.

Music teachers decidedly do not materialize from thin air. All reported that they received much encouragement and parental guidance. One told the interviewer that she would sit and listen to her father play the concertina "by the hour". Church music and home sing-songs were part of the natural order of the week. Several music teachers spoke of the fact that music came so easily to them that when they saw notational music, they automatically "heard it" in their heads. Another music teacher told the interviewer of his being selected at a very early age (Grade 2) for musical training because of high academic and vocal qualifications. He, too, found that music came so easily to him that his accomplishments provided extra pocket money even in high school. People who influenced this same young man were described as being "kind, or they pointed out something that meant a lot to me". He recalled one of his teachers in particular. He was a teacher of English literature who showed that the subject was more than just a subject - "it wasn't his job, it was a passion". On one occasion members of his English class were asked "to walk home a different way, go to some place where you've never been; he wanted us to set ourselves up for some kind of experience that would make us FEEL something ... ." Participants in this study quite often recalled particular teachers as being directly (and sometimes indirectly) responsible for influencing their teaching careers:

> My Grade 5 teacher showed an unusual loving, an empathy with other types of people - the sort of people that you wouldn't necessarily meet, but you still had that experience through her.

The same Grade 5 teacher reportedly "gave her students time to create"; she also "skipped with us ... I wanted to be just like her". Another study participant told the interviewer that:

> My Grade 6 teacher influenced me. She thought that everybody was pretty special; she gave us a lot of positive reinforcement. Everyone wrote; she made us feel that what we wrote was important ... . The next year I had a teacher who was very cold ... my marks slipped.

This Arts teacher had vivid memories of two former teachers. One, she recalled, had a classroom where:

> ... everywhere there was art dripping, there wasn't an inch to walk in, hardly ... I thought, "Oh, this is exciting to be here!" I would like my classroom to be like this, ... where a child could come in and figure "it's fun to be here!" There was diversity, there were mobiles, there were models, there were sculptures ... and it looked like a children's place ... and the children had done it!

(This Arts teacher's classroom matched the description of the one she had admired in her youth.)

At the same time, it should be noted that a negative experience for this same teacher underlined for her the fact that this was NOT something to be emulated in her own classroom. She recalls:

> I was chosen one of six children to paint (the teacher's) cut out dolls that she wanted for the wall. I painted its face brilliant pink. I was accused of giving it scarlet fever and was scolded.

In almost all cases, the study participants spoke of their school principals as being "supportive", "wonderful", "giving us the freedom to pursue teaching goals", "allowing us to grow, experiment and find out things". In one instance it was a particular headmistress who provided a very memorable occasion - to the surprise of many, not least among whom was one of the study participants:

> She came in, laid the Bible on the desk in front of her, pointed to half the class, then stood on a desk and said in a commanding tone, 'Come with me - you are the Phoenician army!'

Recalling the event with some humour, the teacher continued:

> It was chaos! There was no drama there at all, but the fact that she took the risk of standing on the desk! I just thought it was wonderful!

Generally, teacher training was considered to have had neither the desired impact on their lives, nor to have even been a tremendously helpful experience for most teachers. When the subject came up, responses followed a similar pattern. Teachers' college was considered to be BORING. One study participant elaborated on the subject: "There we were, taking a whole class on classroom ventilation ... and yet you have a child's future in your hands!"

However, there was one notable exception to the general apathy on the subject. This teacher described her teacher training as follows:

> Some of the things I enjoyed doing were things I hadn't done before. I remember we had two weeks [of] intensive creativity, ... there was a drama element to it, and I can remember going out and collecting sounds on a tape recorder, and going out to a bay and sitting and recording seagull sounds and writing poetry. Another time I walked up a lane-way, looking at houses and writing descriptive words and trying to create a sound poem.

The same teacher recalls that a poet, Richard Lewis, came to speak to the teachers-in-training and he talked about "getting children to write poetry by experiencing, actually BEING the thing, ... Those teachers did something with me that I hadn't done before, and they made me feel creative."

The same teachers' college that provided the two-week intensive course on creativity through the Arts also set aside every Thursday throughout the two-year teacher training course so that the students could gather in the auditorium to hear guest speakers and artists provide in-depth Arts experiences. "We were trained to appreciate the Arts!"

The data reveal that all of the teachers who participated in this research study advocated life-long learning and certainly practised it themselves. Most spoke enthusiastically about in-service courses that they had taken, workshops and seminars that they had attended and speakers, educators, and artists who had provided inspiration and intellectual stimulation.

The study strongly indicates that early childhood Arts influences remain with the individual throughout his or her lifetime. What is interesting about the previous observation is the fact that very few of the teachers in the study consciously recognized childhood influences which had helped them shape their own professional careers. That is to say, their recognition was tacit; only through this study did it emerge.

Whether the tendency to become an Arts enthusiast is innate or not remains speculative. However, in spite of apparent minor setbacks or negative experiences, the desire or tendency to pursue an Arts career remains strong enough to prevail, even if it appears to lay dormant for a fairly long period of time. The data show that school principals play a major role in shaping and forwarding Arts teachers' careers by providing a great deal of positive feedback and encouraging the teachers to begin or sometimes continue teaching the Arts. It is clear that those teachers in the study who had exemplary Arts programs also had highly supportive principals. What must be said of all the teachers who participated in this study (who were designated as being ones who conducted exemplary programs) is that their job was much more than just an occupation - it was, as one suggested earlier, a passion!

> I was aware of thinking, 'I'm not a teacher, it's more, we are exchanging; we have two ways of being, sharing and sort of just coming together and meeting like an opening for both of us.' (Study Participant)

Perhaps one of the most interesting facts to emerge from the study was that the Arts teachers had mostly negative things to say not only about their own schooling but also their training. Very often they said that they had been regarded in their youth as "rebels". "Rebels without a cause" might be even nearer the truth and with their interest in teaching through the Arts whetted, all had found their raison d'être - the cause or mission that had previously eluded them! If there ever were changes of attitude noted in their teaching philosophies, this generally could be summed up succinctly by saying that they saw the Arts as providing the complementary side of learning which resulted in a holistic approach to education. In other words, they really had not changed their viewpoints, simply confirmed their original hypothesis: something that had been omitted had now been rectified.

Although the teacher/participants in this research felt valued and supported by their school administrators, they expressed doubt as to whether this extended to parents and even other teachers in the system. They even doubted that their students felt that their programs provided much more than a respite from "normality" and as such were only regarded as "fun". The teachers did not express concern over this, however, but rather showed tremendous optimism that the experiences which the children gained through their exposure to Arts education would remain with them although the teachers might not be given recognition for these influences.

In addition to the wish to share, enthusiasm is a very desirable attribute to bring to teaching the Arts - or anything for that matter. One teacher commented on this fact this way:

> I find that if you're teaching anything you have to be very interested in it yourself, because you have to create an excitement and if you're excited about something, then the children somehow capture that ... . If they enjoy expressing themselves, ... just creating something, ... when they remember how they got it, the process of getting it, and all the things that were related to it, it's a symbol of an experience that they've had!
>
> You cannot convince people by yourself ... you have to bring in lots of experts ... different people sharing your enthusiasm.

"Remembering forever" seems to be this teacher's view of education. However, this statement also reveals her modus operandi:

> ... you're not going to get every child you teach only one way. If you're only going to read books, you're going to get - if you're lucky - about a quarter of your class remembering forever. Then if you bring in drawing or modeling you're going to bring in whole lot more, and if you bring in drama you'll bring in some others who are interested. Music, poetry won't appeal to everybody ... . Hopefully you're going to get everybody in one way ... I don't think anybody can't be reached in some way ... .

Another respondent made her attitude towards teaching the Arts very apparent when she spoke of "working with the whole child", which in her terms meant improvisation, movement, song, manipulating matter, colour, and responding to sound. She explained that, "I can't put boundaries on anything, ... because music, movement, dance, play, poems, or whatever, ... all of it is related, is grounded in some human emotion."

Arts teachers who participated in this research knew what worked for their students because they could see high levels of involvement in the activities. They did not rely on one route or mode to interest and communicate with students but rather chose a myriad of ways in which to convey ideas and promote creative thinking. Above all, they recognized their students as being individuals and their right to be treated as such. Most of the teachers interviewed were veteran teachers. In other words, most had spent many years in their profession. Even so, every one of them saw themselves as life-long learners - and endeavoured, sometimes consciously, sometimes not, to persuade students to follow suit.

Retrospectively, Richard Wilbur's poetry comes to mind. Through dialogue, the teachers in question could trace the inception of their life's work. They recognized the constant evolution of mind and in teaching the Arts had found some lasting satisfaction.

> Mind ... is like some bat
> That beats about in caverns all alone ...
> It has no need to falter or explore;
> darkly it knows what obstacles are there ... .

The participants in this study unquestionably "darkly" knew what obstacles were there, yet still managed to "dip and soar in perfect courses through the blackest air".

Is it some intuitive force that is guiding and working in these Arts teachers' favour? Possibly. Possibly not. Berne's studies in Intuition and Ego States strongly point to the empirical fact that intuition is mainly analogous with acute perception. In other words, it may be the result of specific training and much experience, an acquired ability to monitor minute signals and recall stored data with incredible speed. The Arts promote perception through the use of all the senses. Arnstine's thesis is reiterated: aesthetic education appears closely linked to "true learning".

CHAPTER 7

THE RESULTS

> We shall not cease from exploration
> And the end of all our exploring
> Will be to arrive where we started
> And know the place for the first time.
> Little Giddings   T.S. Eliot

A survey of the literature that focused on tacit knowledge and intuition indicated areas to explore and also provided the framework of the interviews which supported this study. It should be pointed out that a questionnaire was not administered to the participants in the research, but rather a guide provided a point of departure for the pilot interviews. Subsequently, the open-ended, highly general questions allowed a great deal of latitude to discuss the more notable aspects of Arts teachers' practical knowledge.

It is perhaps somewhat paradoxical that conversations which began apparently by addressing teaching in a general sense, in point of fact, soon revealed the teacher's practical knowledge. This, however, seems to be inherent in Grounded Theory as a method. It must also be noted that this revelation was often as unapparent to the interviewer as it was to the interviewee at the time of utterance, at least in the initial interviews. It was only after subsequent, careful analysis of the dialogue that the importance of some statements stood out as being particularly illuminating. Often the teachers' words were veiled in imagery and metaphor which masked personal symbolism.

CATEGORIES

These ideas fell into some general categories which reflected the teacher's tacit or practical knowledge. Teachers saw the need to:

- develop a network of communications systems for children;
- understand and have respect for many world views;
- allow for the intuitive element in teaching; and
- promote both group cohesiveness yet also individual growth through a holistic education.

A The desire among teachers to develop communications networking systems is evidenced by such statements as:

- "Nobody knows all the answers and learning is about discovering."
- "It's hard to put your hand on some of the things that I do .... I want to grab their experiences ... . It's pretty complex when you take every one of their clusters and add them together and develop them ... ."
- "I try to make connections ... ."
- "I saw avenues to explore ... ."
- "Wonderful things just opening up"
- "... you don't need to read music, you can actually draw lines of music from it and the music comes from inside out instead of from outside in."
- "A child might ... begin to wonder how he can reproduce a certain pattern he sees in music ... ."
- "... the best I can compare it to would be like a colouring book ... you have a kind of outline but you don't know whether they (the children) are going to colour outward or inward in that outline."
- "... that beautiful gift that they have of looking at everything through a kaleidoscope."
- "There is a creative process that is trying to say 'yes' and to diverge in different areas."
- "I teach a certain technique so that we can enjoy going beyond."
- "I see it (Arts education) as a real octopus ... ."
- "You can't be a confined person to teach the Arts)."
- "Look for ways of changing ... varying ... expanding systems ... ."
- "In a drama situation ... you suddenly perceive there is a need to take a different direction and a need to analyse what's taking place."
- "I really try to say to the children that ... there is not a oneness ... ."
- "Reading just zoomed up with a child who associated it with a warm, pleasant, happy feeling ... ."
- "You find things go off in tangents."
- "You use every possible meaning for looking at the same thing from a different angle."
- "I don't think anybody can't be reached in some way, in some form ... ."
- "I think art comes into everything ... if they make something somehow they remember it, they're part of it and it becomes theirs ... ."
- "If something has a lot to offer, I'll take off in every way I possibly can."
- "Whatever I do, I sort of take in the whole spectrum."
- "It's a blanket without the pattern totally embroidered on it yet."

B Teachers also expressed concerns for promoting an understanding and respect for other world views and, by implication, also other levels of reality. This aspect of their teaching is made apparent by these and similar quotations:

- "At first, it would be at a very physical, literal level."
- "It was more of an 'inward journey' in this new culture."
- "Being very much aware that they were coming from another world."
- "There's no one way of 'being' ... ."
- "... wanted people who were ... without a 'mind set'."
- "It sort of took her into another realm."
- "It's when your head and your heart and your voice are all in a different dimension ... ."
- "I try not to actually participate at the same level as the kids."
- "Within the whole structure of mammals there's a kind of hierarchy."
- "I do a lot of things that are way above their level on purpose because I think they have to be stretched in all ways."
- "... everyone's got something that they can bring in at some level, it's sort of a great big 'messy blob'."
- "First of all, you let the children work at their level, doing a lot of sorting and classifying and just observing ... ."
- "I ... see it as a hierarchy ... ."
- "Levels you're able to achieve ... ."

C Other research (Dennis, 1969) stated that although intuition is inherent in the learning process of most people, they do not have the vocabulary to describe it. The data which were collected as a result of this investigation do not entirely corroborate this assertion. Arts teachers may not be able to explain their practical knowledge in specifically objective terms, e.g. they are inclined to think that "behavioural objectives" do not match with their own aims. But this does not mean they cannot speak of intuitive processes which, after all, are vital for their work. The real question becomes: can mechanists hear what Arts teachers are saying? Apparently, there is evidence of a kind of common terminology amongst elementary Arts teachers. What they generally agreed upon was that intuitive experiences were clearly recognizable. They were also utilized by most of the participants in this study. Images and similes seemed to replace objective language in the teacher's vocabulary when describing intuition. When grouped together from the data, however, the respondents' statements provide a very clear and explicit picture of their attitude to the intuitive knowledge required of themselves and their students:

- "Things that trigger feelings and reactions ... ."
- "Something that clicks."

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- "Sense of what 'fits'."
- "Sparks!"
- "Certain children ... flashed through my mind ... ."
- "I just had a flash right now."
- "Marvellous ideas were pouring forth from the front ... ."
- "With Lisa there is an inward twinkle and it comes through the eyes ... ."
- "... when I watch the eyes, I am catching also that inward trust."
- "When you perceive a need, there is something within you that triggers this response."
- "The students' ideas sort of set off something ... ."
- "In my head I have the themes that are possible, and if I see as I'm reading something clicks ... ."
- "I do get hunches, if something's going to really connect or not ... ."
- "If you don't grab the moment, it's not worth it ... ." (Emphasis mine)

Note the similarities in these statements. Dorothy Heathcote's comment, "It's knowing what is relevant in teaching that counts ...", comes to mind in this context. Both she and the respondents are convinced of the importance of the intuitive mode to the teaching process in the Arts at the elementary level.

D It might appear that group cohesiveness and individuation are paradoxical goals. However, the teachers who were interviewed saw these factors as complementary and certainly not as adversarial. The data support both the idea of group cohesiveness and the notion of individuation - the growth of the individual within the nurturing confines of society in a holistic manner.

Consider the following:

- "People ... share common goals ... ."
- "Being together in that kind of society."
- "Art is a very social activity."
- "We work on really believing in who we are ... ."
- "It's when the whole group is behind you ... ."
- "Times when they can't focus and come together ... ."
- "Singing is a very strong bond between people ... ."
- "There will be ... 120 children ... in this 45-minute cohesive sort of sharing."
- "I got caught up in that, working with people from all over the world ... ."
- "We are exchanging, sharing and coming together ... ."
- "(in a non-Western society) there is not the sense of individuation, it's a real strong sense of total family and tribal feeling ... ."

- "If you're in the family, 'you're in the family' ... but they're not into 'Harlequin Books'!" (a non-Western society)
- "Cats is a metaphor for human characters ... it's a kind of rejoicing in how eccentric and individual we all are."
- "The fact, too, that the children would portray animals also detracts from any racial and cultural differences."
- "I find (rehearsing) so healing, to see what it brings out of children."
- "They (the teachers) get turned on to education and teaching and closeness."
- "Working together (teaching) also is very healing and you get rejuvenated ... ."
- "Drama with a 'theme', that's the vehicle to bring people close together."
- "(the Arts experience) will be very 'sacred', and I just think that that's really powerful!"

ON A CUTTING EDGE

Perhaps the most extraordinary result of this study is that elementary Arts teachers are highly contemporary in their practical knowledge. This is shown in three factors:

1 the acknowledgement of the paradox;
2 a consciousness that their perspective is only one possible framework of events; and
3 narrativity.

Thus it can be said that they are "on the cutting edge" of the future even if they are not conscious of being so.

Often their views at one time did not agree with their subsequent views. This they acknowledged but it did not seem to concern them. In other words, they operate within the paradox.

There is a parallel here to this study which also had to acknowledge the paradox. Dennis (1979) suggested that the researcher was an integral part of the research process, and not an impartial observer. She also stressed the importance which should be given to the concern felt for the factors of the problem at hand, rather than with a set of given procedures to be followed. Dennis did not dispute the fact that much of the researcher's time had to be spent concentrating on the analytical aspects of the work but she also said that a further step had to follow which would point the researcher towards a particular direction.

> These feelings are not necessarily connected with any clarity to the proposed step; indeed, sometimes the proposed course of action seems rationally absurd.

Dennis alluded to this moment as "active waiting". This, in fact, proved to be the case.

Thus another paradox is that we have claimed that this study is rational; yet it must acknowledge the irrational. As researchers, we have had to agree with the elementary Arts teachers: our practical knowledge accepts contradictions; there is no one answer to a problem; and we must be fully aware of possible alternatives in any practical situation.

One result of this is that elementary Arts teachers work with the process of change - a very contemporary attitude. Their practical knowledge includes an acceptance that ideas are in process, in flux, and are not arbitrary and static.

Lancelot Law Whyte in his treatise on "The Growth of Ideas" (in Campbell, 1978) has proposed that ideas, which are "one of the products of imagination, develop and change" and that, unfortunately, mankind has "survived a long time without troubling itself greatly about the growth of (them)". Whyte shows that there is a "contemporary need for a general education which supplants specialization and provides the basis for personal and social life in the world community which we wish to create ...". We must look deeper to find the basis of a general education which can be universal in its appeal. Toffler echoes this theme in The Third Wave (Toffler, 1980) where he proposes the idea that our age will see the establishment of the culture of the individual, diversity in co-operation, and new forms of communication. These themes are echoed in the aspirations of the participating teachers in the current research:

- developing a network of communications systems;
- understanding and respecting many world views and different realities;
- recognizing the intuitive mode in teaching (where intuition is seen to be closely aligned to imagination); and
- promoting group cohesiveness and the process of individuation.

But this contemporary awareness is not always conscious amongst elementary Arts teachers. We noted earlier that during the course of interviews a manifestation of the teacher's practical/tacit knowledge was "often as unapparent to the interviewer as it was to the interviewee". In other words, the importance of what was actually said in the interview did not always seem to be overtly related to the issue in hand. This points to the fact that those teachers who are designated as conducting highly active exemplary programs do not explicitly know the extent to which they are predicting future trends in teaching. With certain modifications, Macrobius' comment on the Dream of Scipio comes to mind:

> They make use of fabulous narratives, for (they) realize that an open and naked exhibition of herself is distasteful to Nature, who, just as she has withheld an understanding of herself from the vulgar senses of man by veiling herself ..., had also wished to have her secrets handled by the wise through fables. Thus her rites are veiled in mysterious labyrinths ... .

Arts teachers constantly deal with symbols and symbols have labyrinthine meanings. They do not have one-to-one relations like numbers. It is understandable, therefore, that the talk of Arts teachers is complex and diffuse. To the mechanistic researcher they might appear not to know what they are talking about. But within the symbolic world of Art their labyrinthine meanings are natural.

This is not new. Robertson (1963) shows that the labyrinth was an ancient three-dimensional model for initiation, the key event of learning in early cultures. It was a symbol performed, built, carved, painted or danced to mark and magically protect the transition of one state to another. (ibid: p. 130).

In other words, the practical knowledge of Arts teachers at the elementary level may differ from that of other teachers through the unconscious use of symbolization. In the Arts, teachers often use narrative to stimulate action (anciently, myth and ritual were one in all social learnings). Narrativity, sometimes fabulous, was an inherent part of the respondents' discussion. While it appeared that this was different from non-Arts teachers, this study did not directly address this issue.

To quote Robertson (1963), "This thought is surely one for educators to dwell on. We may have lost sight of our rites of initiation ... . But in an educational sense, it would appear that the Arts are offering us a second or perhaps a last chance to regain a sense of purpose ... ." They could afford us the opportunity to examine the growth of cognition. As Whyte (1979) puts it, "Thought itself may be understood as a special kind of ordering process. Thinking may be the process of arranging experience ... . Ideas may be ordered experience." If this is the case, this study indicates more than insights into the learning process, it points to a greater understanding of what the elementary Arts teachers genuinely know.

CHAPTER 8

SUMMARY AND RECOMMENDATIONS

This chapter summarizes the findings of the study and gives brief recommendations.

The purpose of the study was to discover the practical knowledge of Arts teachers identified as having "highly active" programs in the elementary schools of Ontario. There was a high correlation between the items gained from the literature and the data. However, as might be expected, there were some differences:

1 some items from the literature did not appear in the data;
2 many items in the data gave a unique view on those discovered in the literature;
3 some items in the data were unique to this study.

In general terms, the results obtained from the data correlated with the pre-test phase of the research.

SUMMARY

It was initially assumed by the investigators that Arts teachers in the elementary schools of Ontario, even those of the high calibre of the respondents, would be unlikely to be explicit in their practical knowledge; and that it was unlikely that they would be able to articulate their theoretical concerns. We also assumed, therefore, that our major task would be to translate what they tacitly understood into explicit language. We had made these assumptions in line with much commonplace wisdom about elementary teachers of the Arts.

As the study proceeded, however, it became clear that this was not entirely the case. We discovered that, in the initial stages of the investigation at least, we had misjudged these teachers' capabilities. Although there were data which we had to translate from the tacit to the explicit, there were much fewer than we had expected.

TACIT AND EXPLICIT DIMENSIONS

The study confirmed that elementary teachers of the Arts although they can articulate much explicitly also "know more than they can say" and many of their ideas are emergents from their own personal experience.

These teachers "philosophize" innovatively about Arts education, particularly in their own spheres of interest. But they may not necessarily have developed fully-fledged "philosophies". Their practical knowledge gives them the capacity to articulate why Arts education is important to them: to speak of the issues that emerge from what happens in the classroom. On the other hand, they do not normally operate from a specific theoretical basis. Rather, they "philosophize" from theoretic emergents that arise from their experience and the intuitive mode.

INTUITION

Intuition played a large part in the practical knowledge of these teachers. They continually trusted their intuitive knowledge: many times they were certain that learning would occur in specific situations, and they were right. They appeared to be in touch with their unconscious: they trusted their innate belief systems and they could recognize and act upon their feelings and intuitions. They also appeared to allow for the tacit or unconscious workings of their students. Although we have no empirical evidence in this study to suggest this, we intuit that their capabilities in this sphere may well be higher than those of many other teachers.

Their use of intuition had considerable effect upon their procedures in the classroom, as follows:

1 A significant element of their practical knowledge was that they were more aware of the "ground" of learning than the particular "figure".

For example, a common methodology was the use of themes to stimulate artistic activity. These themes were often initiated without the teacher having an explicit idea what might happen in the activity; but in virtually every instance the students' work was sincere, absorbed, and led to their learning.

2 Timing.

The appropriate timing of processes and events is an important skill for all teachers. The teachers observed in this study had developed this skill to a considerable degree. Most, however, could not be explicit about it but appeared to have an intuitive ability to use it well.

3 Multiple Realities.

These teachers demonstrated that they understood the concept of multiple realities and that they possessed the practical knowledge to transmit this to their students indirectly. While this was tacit, it was clearly intuited from their work in the Arts where the use of various media for similar feelings leads to multiple forms of expression.

4 Flexibility of Response.

These teachers were aware and open to both the expected and unexpected. They acted spontaneously but also took the time to reflect upon their strategies as they progressed in specific directions. They accepted the rational (e.g., the use of official documents as possible guides) but also the irrational, as when a class spontaneously took the lesson in an unexpected direction.

One element of these teachers' intuitive knowledge initially surprised the investigators. Once discovered, however, it was patently obvious and we wondered why we had not realized it before. There was a correlation between the degree of intuitive knowledge and the teacher's honest responses to the students: those with a high intuitive ability did not attempt to hide their inadequacies from the children. They also appeared to be honest (often, ruthlessly so) in their personal reflections upon their teaching.

PERSONAL AND PROFESSIONAL BACKGROUND

According to the literature, highly capable teachers are liable to have specific backgrounds. This was confirmed by the study.

Many of the teachers with "highly active" Arts programs had personal Arts experience of rich quality, gained from an early age - often through early childhood experiences in parental and/or cultural Arts activities. In many cases, a strong ethnic cultural background appeared to be one basis for good practical knowledge amongst these teachers. Some were strongly influenced by at least one of their own teachers in their predilection for the Arts.

They all held very strong beliefs about the value and validity of the Arts in schools. Virtually all believed that quality and process were more important in the Arts classroom than quantity and product.

However, most of them did not use the teaching methodologies by which they themselves were taught. Many considered that their pre-service experience at teachers' college was less than helpful, although it is fair to say that many had no pre-service training in Arts Education per se.

Their sense of self-worth was not as strongly in evidence as many other factors. They were most self-effacing about it.

This may have been due to a variety of issues. Many claimed that they did not have highly developed skills as artists. They said they were highly interested in particular Arts areas and many were, in fact, practising artists in a non-professional sense. But it is interesting that their valuing of themselves as Arts teachers was predominantly based on their view of their skills in the Arts per se rather than their skills as teachers.

These teachers felt good about themselves and their role because, they said, the students enjoyed classes in Arts education. But they also said that parents, administrators, and trustees generally did not value the Arts as highly as they should when they faced financial and other pressures. Although most of the teachers said they worked in highly conducive situations, they did not consider that Arts education was highly valued in society. This situation is not conducive to the self-worth of elementary Arts teachers.

DEDICATION AND INNOVATION

An important finding of this study is that elementary Arts teachers with "highly active" programs clearly demonstrate a dedication to education through the Arts, and that this extends to their private and, sometimes, public lives. A significant element in their practical knowledge, therefore, was their aim that their students should achieve both success and self-esteem in their classes. They expended great time and effort to achieve these ends.

Part of their practical knowledge was a strong advocacy of life-long learning. Coming from them, this view has authority: they are not beginning teachers with little experience; they have good "know-how" and they consider that life-long learning is a constituent element of this. Indeed, they have all continued with their own education, specifically Arts education, either for their own development or to satisfy their students' needs.

We discovered many elementary Arts teachers who are innovators and risk-takers. Their practical knowledge enables them not to be afraid to experiment with many aspects of both teaching and the Arts. They are not stifled by "the system." They are inclined to use official curriculum documents, most appropriately, not as absolute laws to be slavishly followed, or as monuments to be revered, but as general guides which can inform their program and teaching decisions.

VIEWS OF TEACHING THE ARTS

All the teachers were highly committed to Arts education. From their practical knowledge, they recognized and gave high priority to the creative, evaluative, contemplative, and appreciative aspects of Arts education and the contribution of these factors to student learning and the quality of life generally.

In their common sense wisdom, these teachers all considered it necessary to integrate the Arts across the curriculum. Many taught this way. Others, while supporting the idea, initially emphasized specific artistic techniques; they stated that the students first need skills in order to experiment thereafter.

As teachers, their practical knowledge emphasized the necessity for satisfying individual student differences in expression and learning. They all considered that the Arts were vital for general learning and they found the evidence for this in a positive change in a student's attitude and outlook.

PROCEDURES AND METHODS

Their overwhelming procedural role was "the teacher-as-catalyst". While the "learning by discovery" method predominated in their classrooms, these teachers tended to use a wide range of strategies.

Like so many good elementary teachers, they normally commenced a lesson with what was known or familiar to the children. From this beginning, their procedural knowledge led the Arts teachers to brainstorming and similar associative techniques. In their practical wisdom, they often promoted the discovery of what were, for the children, similar and different ideas from the norm.

The teachers' methods and procedures revealed other aspects of their practical knowledge. While their objectives were directed towards the adequacy of their students' self-expression, most interestingly this was supported through the expansion of "networking systems" amongst Arts teachers. There was a common assumption amongst them that these were of great assistance to them as professionals. As Hofstadter says: "There is some sort of software isomorphism connecting the brains of people whose style of thinking is similar" (Hofstadter, 1980 : 371). A significant element of these teachers' practical knowledge, therefore, is the shared commonplaces that appear to be "in the air" amongst colleagues.

The practical knowledge of these Arts teachers included a flexible attitude towards a variety of circumstances:

1 the changing practical situation of the classroom;
2 the feelings and intuitions of the students;
3 social expectations;
4 the teaching milieu;
5 the use of spontaneity;
6 the questioning of students;
7 response to the unexpected;
8 a multitude of learning outcomes;
9 integration of the Arts with other subjects; and
10 teaching content or subject matter.

The last ran throughout the data. Some of the teachers said that this might be somewhat different from the practical knowledge of non-Arts teachers (readers, therefore, should take particular note of it). The Arts teachers acknowledged that part of their responsibility was the careful preparation of lessons, including the use of content. But they also recognized that the content (subject matter) of their lessons was of less significance than the activity itself. In other words, they tacitly agreed with various authorities in the field that, from an Arts perspective, activity IS the content - or "The medium is the message".

It is understandable, therefore, that the practical knowledge of elementary school teachers in the Arts has a somewhat different focus from teachers in other subject areas. For Arts teachers, indirect learning is (at least) as important as the direct learning of information. Part of the practical knowledge of these teachers, therefore, is that a spontaneous outcome is not only possible but also desirable.

These teachers recognized that their teaching methods "worked" for them because of the students' high level of participation and eagerness. Their practical knowledge led them to make judgements about this through, for example, the extent of eye contact which, they said, clearly demonstrated involvement in the necessary task. From such practical skills and from their intuitive responses to observation, they:

1 diagnosed the needs of individual students;
2 closely monitored their learning changes;
3 discerned their capacities of imagination and skill;
4 discovered whether they made good choices and judgements;
5 assessed their level of creativity.

Intriguingly, it was not always possible to tell whether the teacher gave more value to the students' tacit or explicit operations, or to their accuracy or imagination. There was abundant evidence, however, that the students in these teachers' classes demonstrated different thinking styles.

Their practical knowledge told them that students and teachers need to be very comfortable with each other. None of the teachers could be described as being "distant" from the students. In terms of teaching "registers", physical closeness and "touching" were obviously habitual in some cases. In terms of teaching "thresholds", they allowed reasonable movement by the students and tolerable classroom noise. There was evidence of ground rules having been previously established.

It was a constituent element of an Arts teacher's "know-how" that students were encouraged to identify problems and find solutions to them. They were not told that a particular solution was "right" or "wrong"; rather, they were encouraged to find and explore different alternatives before making up their own minds to pursue a particular direction. Thus the Arts teachers revealed that they encouraged, tacitly and/or explicitly, within the students a self-confidence in their ability to make choices between alternatives; a freedom to make mistakes and to learn from them; the learning of "informed guesswork" (hypothesis); and the taking of responsibility for their actions.

RECOMMENDATIONS

As far as the investigators are aware, this is the first major research study into the practical knowledge of Arts teachers in elementary schools. While it has agreements with similar studies of other teachers, there are sufficient unique findings to show that new ground has been broken. It provides new information useful in a variety of contexts.

FUTURE RESEARCH

From the experience gained and the results of this study, it is recommended that future research should address:

1 The practical knowledge of Arts teachers in:
  - a the assessment of students; and
  - b the evaluation of programs.

2 The practical knowledge of educational administrators (e.g. consultants, principals, superintendents) in:
  - a teacher effectiveness in Arts education;
  - b Arts program development and evaluation;
  - c the function of some consultants across the Arts disciplines.

3 Intuition in:
  - a teacher effectiveness;
  - b student learning; and
  - c the development of generic skills in students.

4 The development of an instrument to screen applicants for pre- and in-service programs and to predict their potential ability to become successful Arts teachers in elementary schools. (See Teacher Education, below.)

5 The practical knowledge of Arts teachers at the secondary level.
(NOTE: It would be necessary in this study not only to investigate the practical knowledge of teachers at the junior high level as compared with those at senior high, but also in terms of the traditional division of content, i.e. general arts, music, visual arts, and dramatic arts.)

6 The impact of the current study (and, possibly, the projected study at 5 above) upon educational policy in all jurisdictions and disciplines.

7 The development of criteria for judging which Arts programs are "highly active" and which are not.

8 A survey of the literature relevant to the significance of Arts education in the development of students' potential (including the cognitive). (See Public Awareness, below.)

TEACHER EDUCATION

As the present study only focused on elementary teachers of the Arts who had "highly active" programs, there was no attempt to discuss the practical knowledge of the other teachers who, after all, comprise the majority of those in Arts education. As Arts teacher education should also improve the abilities of "average" teachers, it is recommended that Arts programs for pre- and in-service education of teachers take into account the findings of the present study.

This would involve extrapolating the issues raised herein to program needs. As a simple example, elementary Arts teachers fall into two categories and both should be considered in teacher education: (a) those who teach Arts across the curriculum, often through thematic approaches; and (b) those who teach very specific techniques and skills which students can later use in their own way. (See also Future Research, Recommendation 4)

PUBLIC AWARENESS

This study, together with other recent research studies (some by the present investigators), have clearly identified "a gap" between (a) informed teachers' views of the values of Arts education and (b) the views of the public at large. This issue must be addressed as a matter of immediate concern.

There is now sufficient research evidence to show that the use of Arts education is a lynchpin in developing the potential learning and abilities of students. This evidence in terms of elementary students will not be reiterated here but it is clear that the cognitive learnings achieved by students through the Arts are the basis for their tacit assumptions, belief systems, and intuitions, without which subsequent learnings are seriously affected. (See Future Research, 8.) It is, therefore, recommended that all jurisdictions should develop and implement a policy to increase public awareness of the values of Arts education.

APPENDIX 1

SAMPLE OF LETTER TO DIRECTORS OF SCHOOL BOARDS

October 28, 1985

Dear (Director):

The Forum for Arts and Media Education (a cooperative enterprise of faculty members of the Department of Curriculum, the Ontario Institute for Studies in Education, and the Faculty of Education, University of Toronto) is currently conducting a research study for the Ministry of Education, Ontario. The Principal Investigator is Professor Richard Courtney (O.I.S.E.). The co-investigators are Professors David Booth, John Emerson and Natalie Kuzmich (F.E.U.T.). The research officer is Dr. Pamela Sturgess.

The study seeks a better understanding of the Practical Knowledge of Elementary teachers of the Arts. The study hopes to improve:

a) the calibre of arts teachers;
b) the teaching of the arts in Ontario.

The study follows on two previous studies:

A. "Learning Through the Arts" (Ministry of Education, 1980) by Professor Richard Courtney and Dean Paul Park (U.W.O.) which examined the intrinsic and extrinsic learnings in the arts of elementary students in Ontario.
B. "Teacher Education in the Arts" (Joint Council on Education, 1985) by Professors Courtney, Booth, Emerson and Kuzmich which examined arts teacher preparation in Ontario and made recommendations for improvement.

It was findings from these previous studies that led to the current research project.

We would very much appreciate your assistance in this study as follows:

1. We would appreciate your delegating a liaison officer to identify one or two arts teachers in your Board who conduct exemplary elementary Arts programs. (More may be identified from which the researcher may select two. Final selection by the research team of teachers will be made by demography.) Identification of teachers in your Board should be

made by at least two people (preferably three) from amongst Arts consultants, Elementary consultants, principals and administrators. [NAME] is familiar with this project and has expressed an interest in being associated with it.

2. We would ask permission for the Research Officer of the study to visit the identified teachers (on sites) for approximately five days (spread out over several weeks) during the period from January to May 1986 in order to conduct open-ended interviews, have discussions as teachers go about their duties, and observe some of their classes.

It is an assumption of this study that Elementary Arts teachers responsible for highly active programs have inherent Practical Knowledge of teaching operations in general. It is also assumed, however, that "they know more than they can tell". That is to say, their Practical Knowledge has at least two constituent parts:

a) explicit knowledge which they can express in language;
b) implicit knowledge which is tacit and which they may not be able to put into words.

The study will use logical inference to reveal the tacit, which related to the explicit, reveals a teacher's Practical Knowledge. It will be the task of the Research Officer to observe and discuss in an open-ended manner with the teacher the key issues of the study:

A. The teacher's basic assumptions, attitudes, and beliefs in relation to Arts education, his or her confidence and self-esteem, possible disparities in his or her professional role, etc.

B. The teacher's Practical Knowledge in the act of teaching, the nature of tacit/intuitive/implicit knowledge, its relationship to explicit knowledge, strategies, the signs he or she believes indicate that his or her teaching "works", use of abstraction vs. concrete, human attitudes, teaching style, etc.

C. Practical Knowledge in the use of structures: tacit/explicit thought in planning, use of rules and principles, etc.

D. Images and metaphors used by the teacher that reveal Practical Knowledge.

E. The teacher's degree of flexibility within the practical.

F. Tacit/explicit levels of Practical Knowledge in relation to students, interactions, assessment in judgement of arts creativity, etc.

The study will use a Grounded Theory methodology. Through this, it will:

a) document what the teacher says and does (raw data).
b) analyse the data to reveal what the teacher knows.
c) extrapolate the data and the analysis into a general theory of the Practical Knowledge of Elementary Arts teachers.

All data obtained will be treated as confidential. Codes will be used for individual teachers so that, in the final report, there will be no way they can be identified.

We do hope that you will agree that this is a highly worthwhile study, and that you will be able to cooperate with us in the project. We would be grateful for a reply by December 15, 1985 so that planning can proceed according to schedule.

Yours Sincerely,

Pamela Sturgess, Ed.D.
Research Officer
on behalf of the Investigators:
Professors Richard Courtney,
David Booth, John Emerson
and Natalie Kuzmich

APPENDIX 2

INTERVIEWER'S GUIDE

A. This study will NOT administer a questionnaire. This current document is prepared to provide the interviewer with the kind of background necessary prior to conducting interviews with and observing teachers in the sample.

B. The interviews will be conducted through Grounded Theory methodology, e.g. by open-ended and highly general questions, allowing the interviewee great latitude to discuss matters at length.

C. This document is intended to present the CATEGORIES of questions for which we require responses. It is assumed that the subsequent actions will be:

1. refinement of the questions;
2. pilot testing of these questions with a few teachers;
3. revision of the questions;
4. collection of data using the revised questions.

D. The purpose of the questions is to reveal the teachers' practical knowledge - how what they DO reveals what they KNOW. In most cases, the answer will be the signifier of what may not be consciously realized by the teacher (the signified). The job of the interviewer is to make INFERENCES from what the teacher says, or from observations of what the teacher does.

QUESTIONNAIRE

A.

TEACHERS' BACKGROUND TO PRACTICAL KNOWLEDGE

[Revealing Basic Attitudes, Beliefs, Tacit Knowledge]

1. What have been the main influences on your teaching?

   a) How has your teaching been influenced by:
   - "crossroads" in your career?
   - significant people?
   - your own schooling?
   - your teacher training?
   - public opinion?

b) Which teachers did/did not influence you? (How?)

c) Why did you become a teacher? An Arts teacher?

d) What place in your psychic life does your career play?

e) What aspects of your life have most affected your teaching?

2. What areas of study have most interested you?

a) At what times in your life?

b) What psychological factors might account for that interest?

3. Do you hold strong beliefs?

a) How do you use the term "education"?

b) What is the difference between an educational and a non-educational experience?

c) What is the difference between education and Arts education?

d) Have you changed your beliefs in your teaching career?
From what to what?

e) In the Arts classroom, which is more important: quantity or quality? Process or product?

4. Other people hold views of Arts education. What do you think are the views of:

a) the students?

b) their parents?

c) the administrators of your school and board?

d) the general public? (any disparity between views of teacher's role)

5. Do you have skills as an artist? (What?)

- How important are they in the classroom? (attitudes to the Arts; to teacher's abilities)

6. As an Arts teacher, do you think that you are:

- highly valued/reasonably valued/not valued?
- highly skilful/reasonably skilful/not very skilful? (teacher confidence)

B.

PRACTICAL KNOWLEDGE IN THE ACT OF TEACHING
[Revealing Teacher's Practical Knowledge]

1. How would you characterize your teaching?

a) What do you DO when you teach?
(Strategies)

b) What works for you? (Why do you do what you do?)
(Reasons)

c) How do you know when your teaching works?
(Signs)

d) In your teaching, do you mainly stress the difference or similarity between things?
(Metonymy/Metaphor)

e) Are your "hunches" usually accurate?
(Tacit Knowledge)

f) What instructional techniques do you use?
(Strategies)

g) Do you have a good theoretic grasp of your art and how to teach it?
- Which sources have been of most use to you?
- What aspects of child development are important to you?
(Explicit Knowledge; Teacher Confidence)

h) Do you relate your classroom work to the local community?
(From Tacit to Explicit Knowledge)

i) Do you mould your teaching to any of the following:
- the changing practical situation of the classroom?
  (Teacher Flexibility)
- the feelings of the students?
  (Teacher Humanity)
- social conditions and expectations?
  (Flexibility and/or Determinism)
- the "world" of the classroom?
  (Social World of the Classroom)
- theory and/or theories? (Which?)
  (Explicit Knowledge)

j) Which is more important in Arts education - the subject matter, or how things are done?
(Abstraction vs the Practical)

2. When teaching, what "thresholds" do you use?

a) How much noise do you allow? (great deal/some/little)

b) Are you physically close or distant from the students?

c) Which "registers" do you use?
- the ruler mode (I'm in charge here)?
- the telling/showing mode (the one who knows)?
- the catalyst mode (when I do X "it" has begun)?
- the reassurance mode (put yourself in my hands)?
- the role-player mode (I didn't know that, tell me more)?
- the devil's advocate mode (surely that's not true)?
- the good listener mode (Good! What happens then?)?
- the teacher-in-role mode? (for drama teachers)

d) What kind of classroom atmosphere do you try to create?
(Tacit/Explicit Operations)

3. In a typical Arts lesson:
    a) Are you conscious of what is going on?
    b) Does what is going on mean something to you?
    c) Does it mean more to you than to the students? (What?)
    d) Do you have beliefs about what happens? (What?)
    e) Are these beliefs mostly conscious or unconscious?
    f) Do you like what is going on?
    g) Do you choose what happens?
        ° Do you have reasons for what happens? Do they work?
    h) Are there causes for what happens?
    (Tacit/Explicit Operations)

C.

THE TACIT IN PRACTICAL KNOWLEDGE

[Degree of Tacit/Implicit/Intuitive Thought]

1. How does intuition affect your teaching? Are your guesses right?

2. What unconscious decisions do you make in your teaching?
    a) Does your unconscious affect your judgements about students?
    b) Do you allow for the unconscious of the students?
    c) Do you listen to the space between the students' words?
    d) Can your students describe in words what they know?
    e) In your classes, do students express more than they know?

D.

STRUCTURES AND PRACTICAL KNOWLEDGE

[Teacher's Balance of Tacit/Implicit; Strategies]

1. What explicit rules do you have for what you do? What principles?
    (Rules or Principles of the Practical)
2. Has any book or source helped you to plan your program? (Which?)
    (Degree of Explicit Knowledge in the Practical)
3. How well do you plan?
    a) Does your students' work meet your planning expectations?
        ° Is this important? (How?)

b) When planning, how do you give a lesson continuity?

c) When planning for a year, how do you structure your ideas?
(Relation of Implicit/Explicit; Strategies)

E.

IMAGES/METAPHORS AND PRACTICAL KNOWLEDGE

[Identification of Images/Metaphors of Practical Knowledge]

1. What metaphors/images characterize your teaching?

a) In teaching, do you use metaphors or symbols? (Which ones?)

b) Thinking of yourself as a teacher, how do you see yourself?

- if you were a chair, what sort would you be?
- a meal?
- a drink?
- an animal?
- weather?
- a car?
- a song?

2. How do you picture yourself as an Arts teacher?

- as a gardener watering the flowers?
  (Romantic - Rousseau)
- as a friend and pal?
  (Romantic - Neill)
- as a gardener trimming the bottom of a bush to make it grow taller?
  (Academic - Developmental)
- as a dentist pulling teeth?
  (Traditional - Academic)
- as wallpaper on the wall?
  (Pragmatic - Dewey)
- as pouring information into a vessel?
  (Academic)
- as parent passing on values?
  (Cultural Transmission)
- as a machine giving input to a substance?
  (Mechanist)
- as a leader and example?
  (Empathy-Modeling for Potential)
- as encourager and helper?
  (Holist for Potential)

- as a policeman/woman?
  (Disciplinarian)
- as artist with apprentice?
  (Arts-Traditionalist)

F.

FLEXIBILITY AND PRACTICAL KNOWLEDGE

[Degree of Flexibility Within the Practical]

1. How flexible are you as a teacher (very/average/not very)?
   a) Do you closely follow lesson plans, or do you allow for the unexpected?
   b) Do you consider alternative methods of communication?
   c) Are you spontaneous?
   d) When dealing with your Arts class, is your thinking clear and precise, or do you let your thoughts flow?
   e) While teaching, are you influenced by any theory or not?
   f) Do you question the students (a lot/somewhat/a little)?

2. Should the Arts teacher:
   a) Encourage students' intuition?
   b) Allow for a multitude of outcomes?
   c) Use the whole environment for instruction?
   d) Match the aims with the methods used?
   e) Involve students' feelings?
   f) Integrate all the Arts with all subjects?
   g) Intervene in the students' Arts experience?
   (Purpose)
   h) Encourage students to be responsible for their choices?
   (Characteristics of Flexibility)

G.

PRACTICAL KNOWLEDGE IN RELATION TO STUDENTS

[Implicit/Explicit in Human/Learning Strategies]

1. How would you characterize your relationship with students?
   a) Do you let them solve their problems or sympathize with them?
   b) Do you think students should:
      - be responsible for their own decisions?

° make up their minds and stick to their decisions?
° be instructed by you in their choices?
° consider others when they make decisions?

c) Do you try to see things from the student's point of view?

2. How do you assess students?

a) How do you diagnose the needs of students?
b) What kinds of "change" or "improvement" do you expect?
c) How do you achieve this?
° Which of your actions are most/least effective?
d) Are your "best students" convergers or divergers?
(Independent/Dependent, Rebels/Traditionalists)
° Which other school subjects are they good at?
(View of Transfer from Arts Learning)
e) What signs of learning do you look for?
(Students' Actions or Words)
f) How do you tell if they:-
° are imaginative?
° make good choices and judgements?
(Signs)
g) Are your assessments of students mainly based on:
° grades/your "hunches"/a mix of both?
(Tacit/Explicit)
° objective methods/student's development/a mix of both?
(Abstract/Human)
h) What should students learn in your classroom?
(Tacit)

H.

CREATIVITY AND PRACTICAL KNOWLEDGE
[Tacit/Explicit in Arts Practical Knowledge]

1. How creative are your students?

a) Do they discover for themselves, or by your showing them?
(Teaching Mode)
b) Do they mainly put ideas together as separate entities, or as similars?
(Metonymy/Metaphor)
° How can you tell?
(Signs)
c) What signs show the students' creativity?

d) Are students able to discuss their creativity?
(Teacher's Valuing of Tacit/Explicit)

e) With their own work, can they see implications?
(Symbols, Metaphors, a Variety of Meanings)

f) Are they best in process or product?
(Teacher's Values)

g) How absorbed are they (highly/average/not much)?
(Teacher's Values)

h) Can they transform their thoughts into artistic creation?
- ° Do their artistic actions reflect their thoughts?
  (Teacher's View of Sub-text)
- ° How can you tell?
  (Signs)

i) Do they "guess" (hypothesize) accurately?
(Tacit)

j) Do you approve more when students: plan carefully, or "think on their feet"?
(Teacher's Valuing of Tacit/Explicit)

k) Do you approve more when students are:
accurate/imaginative/a mix of both?
(Teacher's Valuing of Imaginative)

2. In the Arts, are your students good with problems?
(Teacher's Valuing of Elements of Problem Solving)

a) Do they know there are problems to solve?
b) Do they engage in independent problem solving?
c) Do they find solutions to problems?

3. Do your students demonstrate different thinking styles?
(Teacher's Valuing of Disparate Thinking Styles)

a) Do they work differently with different media?
b) Do they see meanings in life from their work?
c) Does their work help their socialization?
d) Do they distinguish between "liking" and "appreciating"?
e) Do they distinguish between "emotion" and "feeling"?
f) All of the above? How can you tell?
(Signs)

APPENDIX 3

SAMPLE OF RAW DATA

EXAMPLE 1.

P. In your class you said you did this neat thing in dramatic Arts when you were teaching the tropical forest.

T. Right, it was just the fact that it triggered an idea in me.

P. What was it specifically, do you remember?

T. Yes, it was from a book; it was just a simple junior level library type book and I think it was Hello Jambo, if I am not mistaken. Just a little wee book.

P. So the same story was used in the dramatic Arts class as you used in your own class?

T. Yes. And it became a springboard. And that triggered the words and the not being able to speak each other's language and then the different tribes. And it just rolled. And as with many things that come out like that, you find yourself on a path and all of a sudden it just widens and grows and grows. And the unit I had originally planned to do - this was environmental studies now - I had planned to do that unit in two weeks and we went on for five weeks and could have added even more things to it. But look at the integration we had. We had drama; we had music; and their chants were gorgeous; we had creative movement, their own dance; music appreciation because I brought in tribal music. You know that wild beating drum, and we even went off into comparing it to today's popular music and the Negro culture, the Black culture in music.

P. That was quite the spin-off!

T. It just went all over the place. It was a wonderful time.

P. Did they create their own music, or was it basically that they used other tribal music?

T. We used the tribal music for the creative dance and really explored space because again I saw very stilted movement. Everybody was upright. So we had to talk about other ways of moving. How would they move through the trees when the honey is at the very, very top of the trees? How would they have to move? Would they walk from branch to branch? No. They had to jump and climb and reach. Well, now you have some real wild forms leaping around. It was that environment we had created!

EXAMPLE 2.

P. On spiders!

T. On spiders. We were just spider people. It was great. It started with Charlotte's Web and all of a sudden we were doing all kinds of drama activities with Charlotte's Web and we springboarded all over the place. When Wilbur decided to run away, when the pig decided to run away from home, he was going to get out of that pen and run away from home. Well, we got into running away from home. "Would you run away from home?" "If you ran away from home and you went out there in the world, well - go out there and come back, show me what you saw." They had to do it in mime and show me a conflict that they saw. "Go back out into the world and find me something nice and loving." "Come back and show me what you saw." "Now you have a choice, do you really want to go out there on your own or do you want to stay with me?" I went into role that time again and I was a farmer.

P. Very much teaching values.

T. Yes, a lot of values clarification stuff. No choices, and no right and wrong.

P. Tell me a bit more about Charlotte's Web.

T. I went ahead and took the unit and decided that I was going to do a purely integrated program. So that from nine to twelve everyday, all we did was spiders. We did the rest of the stuff in the afternoon. A little bit of math .... .

P. So this included math .... .

T. Well, this unit, it really broadened out. I managed to integrate science, reading, creative writing, music, the Arts, the visual arts, drama, so I had it all from nine to twelve. Well, with the science we went into the exploration of spiders! They are fascinating insect/animals or whatever you want to call them. We went into spider myths. Now, did you know that when a spider walks across your path, it meant that you were getting a new suit of clothes? Well, we found out all kinds of interesting things, like when you step on a spider, rain will come. And all of that stuff. We took the old Greek myth of Arachni and how the first spider came to be formed according to that myth, long, long ago. And that branched out - it was our literature part of it. We went to the gym and of course you have to move like a spider when creating a web. Then there are parachute spiders and rasp spiders. So we explored those in science and then went to the gym and took that into creative movement. "Walk around, imagine you were a spider, show me by your movements what kind of spider your are."

P. Did you create webs out of string or anything like that?

T. We did wonderful spiders; we made gigantic spiders out of papier maché. Everybody had their own and put pipe cleaners in them and tried to make them as realistic as we could and because they were so large, they were easy to manipulate. And we painted them and we added the eyes and all the different parts. We tied string on them and hung them up in the room.

APPENDIX 4

SAMPLE OF DATA ANALYSING IMAGERY AND METAPHOR

NAME	NO.	PG	PHRASE	CONCEPT EXPLANATION
X-1	1	2	allowed us to grow	systems/botanical
X-1	1	2	wonderful vehicle	dynamic
X-1	1	7	it's like planting seeds and little by little, and bit by bit it gets nourished	systems/botanical
X-1	1	9	there were all these seeds	systems/botanical
X-1	1	9	pieces of the puzzle	systems
X-1	1	10	as a way in	systems
X-1	1	10	it all springs	systems/botanical
X-1	1	11	I provide the framework	architectural
X-1	1	11	...and I guess the structure, so to speak too	architectural
X-1	1	13	standing and stepping in someone else's shoes	vicarious
X-1	1	20	a network of people that share common goals	systems/communications
X-1	2	1	the roots of drama	systems/botanical
X-1	2	3	They're the bones of the program ... they're the bones, they're the framework	architectural
X-1	2	3	principles upon which I build my program	architectural
X-1	2	3	I use that as my source	systems/botanical
X-1	2	3	I tie the thing in together	systems/communications

NAME	NO.	PG	PHRASE	CONCEPT EXPLANATION
X-1	2	4	that particular source	systems/botanical
X-1	2	4	using this particular vehicle	dynamic
X-1	2	4	it started with a structure which then branched out	systems/botanical
X-1	2	4	I don't really see it as a hierarchy but in a way it is	group cohesiveness/isolation
X-1	2	4	how do I fit into the scheme of things	systems/communications
X-1	2	5	a large range of ways to explore	systems/communications
X-1	2	5	levels you're able to achieve	group cohesiveness/isolation
X-1	2	5	the way in which they react and respond will ... deepen	group cohesiveness/isolation
X-1	2	6	areas of strength	systems/communications
X-1	2	6	more refinement	systems/communications
X-1	2	6	I can expand ... stretch it	systems/communications
X-1	2	7	we explore what we were going to do	systems/communications
X-1	2	8	I will extend it within the creative Arts, and then language	systems/communications
X-1	2	8	we may extend it through paint	systems/communications
X-1	2	8	we may extend it through cut and paste	systems/communications
X-1	2	8	then and through drawing and maybe patterning or some form of story writing	systems/communications
X-1	2	9	try to make connections	systems/communications
X-1	2	9	like a string of pearls	systems/communications
X-1	2	10	flows, one into the other (fruits & vegetables)	systems/botanical
X-1	2	11	you see an avenue	systems/communications

NAME	NO.	PG	PHRASE	CONCEPT EXPLANATION
X-1	2	11	I saw avenues to explore	systems/communications
X-1	2	12	some really great opportunities for learning and I tried to capture them	systems/communications
X-1	2	12	so I have a sense now of what works	systems/communications
X-1	3	1	it wasn't as if I were sitting on my hands	dynamic
X-1	3	4	I taught things as if in isolation	systems/communications
X-1	3	4	you have to constantly try to find new ways	systems/communications
X-1	3	5	it's important that we help them find new ways	systems/communications
X-1	3	5	she's got so much 'input'	systems/communications
X-1	3	6	the other end of the spectrum	systems/communications
X-1	3	7	found ways of channeling it	systems/communications
X-1	3	7	wonderful things just opening up	systems/botanical
X-1	3	9	we can't hope ... give them a nice little blueprint	architectural
X-1	3	10	there are certain children ... that flashed through my mind	systems/communications
X-1	3	12	let's see if we can't find a way	systems/communications
X-1	3	12	it was too open-ended for him	systems
X-1	3	13	I, too, was struggling	dynamic
X-1	3	14	it sticks out in my mind	systems/botanical
X-1	3	15	I have a sense of what 'fits'!	systems/communications
X-1	3	15	It's something that clicks	intuitive/perception

FREQUENCY OF OCCURRENCE - METAPHOR CATEGORIES

	CATEGORY	FREQUENCY	PERCENTAGE
1	Systems/Communications	64	15.0%
2	Miscellaneous	48	11.2%
3	Systems	48	11.2%
4	Dynamic	41	9.6%
5	Systems/Botanical	27	6.3%
6	Group Cohesiveness/Isolation	27	6.3%
7	Levels of Consciousness	20	4.7%
8	Systems/Organizational	19	4.4%
9	Vicarious	19	4.4%
10	Systems/Networking	18	4.2%
11	Intuitive/Perception	13	3.0%
12	Architectural	10	2.3%
13	Creativity	9	2.1%
14	Holistic	9	2.1%
15	Biological	8	1.9%
16	Boundaried	8	1.9%
17	Systems/Mathematical	8	1.9%
18	Confrontation	6	1.4%
19	Integration	6	1.4%
20	Nourishing	5	1.2%
21	Systems/Hierarchical	4	0.9%
22	Systems/Mechanical	4	0.9%
23	Analysis	3	0.7%
24	Systems/Sound	2	0.5%
25	Systems/Technological	1	0.2%
26	Systems/Visual	1	0.2%
	Total	428	100.0%
	Occurrence of All "Systems" Categories	196	45.8%

APPENDIX 5

SUGGESTIONS FOR DISSEMINATION OF THE RESEARCH MATERIAL

1. Design an illustrated flyer which contains a synopsis of the research. This should be sent to colleges, universities, and teachers' federations across Ontario, other provinces and selected universities in the United States of America.

2. Write a précis of the study for publication in a scholarly journal whose readers are concerned with teaching and/or aesthetics.

3. Distribute a videotape which focuses on a case study arising from the research (see Appendix 6). This pilot project may be sent to TVOntario for possible viewing by a wider audience.

4. Produce a sound recording of the video tape's narration. This could be made available for teacher education under the auspices of the Ministry of Education.

5. Use the data which has been collected as a result of this research as the basis of a course for graduate teachers.

6. Compile an annotated bibliography for distribution to interested teachers and institutions.

7. Compile a slide/tape presentation which can be used at public talks and seminars.

8. Write a computer program and guidebook to provide a self-analysis approach to understanding the essence of the research data.

9. Prepare a series of video-taped lectures, given by the Principal Investigator for distribution on local and distance education networks.

10. Translate suggestions 1 - 9 into French.

APPENDIX 6

PROPOSED SCRIPT FOR VIDEOTAPE
TENTATIVELY ENTITLED:

SPONTANEITY AND STRUCTURE:

A CASE STUDY OF AN ARTS TEACHER'S PRACTICAL KNOWLEDGE

Title : Practical Knowledge of Arts Teachers

Writer: Pamela Sturgess Date: August 18, 1986

SCENE	VIDEO	AUDIO
1.	Name in Class	One of the reasons I teach art as opposed to English or theatre arts or French, which I also have experience in, is that the one that is really exciting me is art because compared - well maybe not with theatre arts - but particularly compared with English and French what happens in the process of creating is to a large extent right out in front of the kids, whereas what happens in English, after the kid starts conceiving an idea and then composing an idea and taking it through the conceptualizing stage and then into some of the experimental stages and doing something in writing, the kid hides everything, and it's a very private kind of thing and there is not very much opportunity to intervene in a constructive way, I can't in English come along and say, "Now, this is interesting; what is it that is making you choose this adverb or this sentence structure?" Whereas, in art work, I can come along and say, "Now, this is an interesting decision you are making." It's in the nature of the subject and I just find this subject more exciting and that active involvement is really exciting for me, personally. I see it also in dramatic art, but it's really coming out now in art in developing that decision making and problem solving process. A way that I might include the dramatic arts and bring them into my program would be to work with costume designs, set design and that would pull in script analysis which combines English as well as dramatic arts, so it's in the back of my mind to do it, ... I'm not quite sure yet.
2.	Name, Driving	At the moment, I think that the key I bring to my classroom is an excitement on my part for sharing visual awareness. When I come to work every day, it's a delight because half the time I'm just rubbernecking around the highway. I'm surprised I haven't been in an accident the last four years, because what I'm doing is saying to myself, "Oh, look at that!" This morning the mist was so low on the escarpment, and I'd say, "Gee, I wonder if it will still be there if I take my Period Two kids out and have them look at this?" or, "Look at the way the light is behaving here, what is it doing behind me? Gee, it was so neat, like backlighting going on in my rearview mirror. Should I turn around and have a look? No, too many cars behind me." I like to bring visual excitement into the classroom - and every once in a while it happens with the kids too and I hope it gets contagious.

Title : Practical Knowledge of Arts Teachers

Writer: Pamela Sturgess Date: August 18, 1986

SCENE	VIDEO	AUDIO
3.	Name, Driving	I can remember when I was in Vancouver. Let's see, I guess I would have been six, maybe seven years old, getting a prize at an art show. I can also remember going to see theatre with my mother, at an open air theatre in Stanley Park and I have very strong visual memories as well as personal, pleasant sensations about that whole thing, so probably there was a very early connection made with theatre and the visual excitement of watching things.
4.	(Loon's Necklace)	I'm a Navy brat. We moved every three years, Vancouver happened to be where I was when I was in Grades 2, 3, and 4. I used to take the bus from North Vancouver into the Vancouver Art Gallery and attend Saturday morning art classes. I remember watching the Loon's Necklace. I can see shots from that right now in my mind and Emily Carr too. I remember being moved by Emily Carr's paintings at that time. We went to Stanley Park a lot; I remember the totem poles; I can picture them in my mind. My parents would have been encouraging whatever was happening, because they were the ones who said, "Here is your bus fare to go into the Art Gallery on Saturday mornings."
5.	Name in Class	Birgit Bateman also encouraged me to teach the way I teach now. She was teaching Arts, and a lot of crafts, and if I dropped into her classroom, there were always really neat things going on and, in fact, I probably get that word 'neat' from her. She had that visual excitement and a drive to pass it on to kids. She would sort of drag them by the scruff of the neck and say, "Look, get up off your backside and look at this!" And I think I got it from her, but maybe not so evangelically. I started a picture file with the kids this year, worked out a list of categories because they were always going to magazines when they needed some assistance for their visual memories - "What does a rose look like?" - "What does a car really look like?" - and so that got onto the idea that if you are really familiar with something, it is easy to draw, because you just go into the filing cabinet in your brain and you pull out mental pictures from your visual memory. Sometimes there are things that you want to draw or paint or create, but you are kind of fuzzy about the details. You are not quite sure what it looks like, so you have to go to the real

SCENE	VIDEO	AUDIO
		thing or take your own pictures. A lot of artists do that. I suggested some categories and the kids went to the magazines and started cutting out all these pictures and putting them in the picture files. Lo and behold, what was happening was that the talk that went on in the classroom went something like ... "Oh hey! Look at this, look at this; ... . Look at the detail in this!" As soon as I hear them talk about 'looking at the detail in this' I say to myself, "Oh good. You're talking visual awareness language right now." They brought me pictures in that particular lesson and they said, "Isn't this neat? I said, "Yes. Look at the texture in that; look at how the line is here. Oh boy! I really like it." And I deliberately used art terminology, you know, the vocabulary. A couple of days afterwards, I guess one of the kids brought in a picture and I started raving about the lines and texture and some kid said, "You're the only person I know who would look at a picture of a camel and talk about the texture." It's not just the camel, it's a whole bunch of other things. The fact that this kid was aware of this I thought was great. She was seeing beyond the surface of things.
6.	Name in Conversation (Home Atmosphere)	Looking beyond the surface of things is part of what I do in theatre design, specifically set design. Often I have to struggle with making the actual scale model before I can do the drawings (the carpentry drawings for the construction of the set).
7.	Model of	The model is made of styrofoam and balsam wood, like a piece of sculpture. I have to sort of fumble around and experiment with my hands and then I say, "Oh, right, that's how big I'm going to have to make this flat and these are going to be the measurements for the roof and I have to change this around - this is how the chimney is going to fit in." I'm working on a play called Virginia's Room right now, so this is how the chimney is going to fit in here, but I often times have to struggle with physical stuff before I can do the conceptualizing on paper. First, I have to ask myself, "How do I make this clear for other people to paint and construct?"
8.	Name in Conversation	I'm very alert as I'm going through the play as to how it would look on stage. What kind of environment do I have to provide for the

SCENE	VIDEO	AUDIO
		actors to play in. When I read through the play I see actors moving around on the stage. I see the set. I see the costumes; I see the lighting, so that by the time ... . I try to be aware of a possible visual image, like a metaphor, which will capture the mood or the atmosphere.
9.	Specific Stills (slides)	In Virginia's Room we never have any specific answers to a whole bunch of questions which come up in the play. There's no way to interpret it, so what I want to get is a sense of insubstantiality, okay? There are no hard edges or firm lines in the script. There's very little to hang on to in the script, so what I want to do is translate that sense into the set, and so then I have to start thinking of ways to create an insubstantial set or a set that does not have very precise edges to it; like it doesn't finish, you don't know where it ends and where it begins; it becomes transparent - that kind of thing. Virginia's Room is a kind of gothic horror, a modern gothic horror.
10.	Video of Virginia's Room	By the end of the play you are left saying, "Hey, wait a minute! What's going on here?" and it begins with four characters and they are in a room and they're negotiating with a young girl whom they are trying to persuade to play the role of Virginia in order to mollify her older sister, Virginia's older sister, and there's this whole story - or is it the truth? - which is created about something that happened in the 1930s (it's set in the 1970s) - or is it? And then by the end of Act I, she's agreed to go along with them and play the role that they have asked her to play - or is she playing herself? - or is this just a memory that is coming back to her? And then the second act of the play involves the other three characters coming back on as the three characters from the 1930s - or is this reality? And so, by the end of the play you don't know whether she has really been murdered or whether she's just re-enacted an old murder from the 1930s, or whether it is all in her mind and she's locked up in an insane asylum anyway.
11.	Video and Stills	I started off with a sense of giving the audience a super realistic set, so realistic that they would say, "Boy, this is really realistic. Wait a minute, this is really, really realistic; I wonder if there is

something I should watch out for?" So that there is kind of a visual unease going on. That was the image I went with first. Then I wanted to set it in a room where there were rafters showing. So that we could have the rafters coming up like a cage, we would just show the beams, no roof really, just rafters coming up, and a sense of 'cageness' with part of the roof coming back down again towards the audience as if we were in an attic. There'd be a sense of 'cage' because of all the 2 X 4s that would be showing, the skeleton of the house (so to speak). But there is also the sense of a trap. There'd be this image of bars; the image of bars has been a continuous part of the mental image I have had with the play and also the structure of the set top which is enclosed. It is closed right in. Virginia never leaves the room except to go into a bathroom which is part of the room. She goes through a door and then comes back into the room again, but it is obviously part of that enclosed part here and everything else that is beyond the bathroom and her room is what I want to get the impression as being very insubstantial visually as well as mentally. There is also a dichotomy here, there is the cage, but it is an insubstantial cage.

We don't know whether she is in an insane asylum, or if she is in her own room, or if she is in a 1970s room or if she is in a 1930s room. There is also a lot of dichotomy in the script, but what we have, in a sense, is a set inside a set. Ideally what I wanted to do was make the whole set disappear by the end of the play but we are not going to get to that. It's just technically beyond us.

What I would like to do is to use scrim so that as the light hits the top of the threads woven in the fabric, it's opaque, but as soon as you put any kind of light behind the fabric it becomes transparent. If you take the light totally off in front of the fabric, then it disappears. I may be able to do it for one wall, part of the top of the set, and for the back part of the house, but I ran into a problem with logic and the logic was making the doors and the chimney disappear. I couldn't make the whole set disappear, so I had to question if it was worth doing. This becomes part of the problem solving which is in the classroom too. It is exactly what the kids go through. (If part of the house remains substantial and the rest becomes insubstantial, why those parts?)

SCENE	VIDEO	AUDIO
		As I read the play I see it as if I'm sitting in the audience watching it. It is not words on a page for me and it is not a movie either. It doesn't unfold like a movie; I don't see the whole set. I see it set on a stage and in this particular stage, a proscenium stage, I see it set with a proscenium arch. I get a sense of Victorian structure, redecorated in the 1930s art deco and all kinds of images come to me immediately about art deco. But they are not details; I don't see what colour it is; I don't see what lines they are. I just know. Okay, I have to do a little bit of research on some art deco, do a little bit of research on looking around for Victorian architectural structures. The play's dialogue talks about the 1930s, so I have to use what is in the dialogue.
12.	Name in Conversation	Part of the process of working through a production is that you have regular production meetings in which heads of departments are there, so that costume is there, set construction is there, makeup is there, I'm there as set design, the director is there, the producer is there, the lighting designer is there, and everybody comes for the whole meeting. It's not just as if somebody presents a report and then goes away, because there is a lot of give and take. It also means that everybody has a similar understanding, a similar concept of what's happening with the play and often times what the director is envisioning is exactly what everybody else is envisioning and that presents very few problems. Sometimes the director says, "Oh no, this is not quite what I had in mind" and then it becomes a matter of the director's mind and my mind and the costumers' minds getting an agreement and it's really exciting.
13.	Details of Sketches Charts	As soon as I finish reading the play, I jot down a quick sketch of the set on a piece of paper - a thumbnail sketch - maybe a series and of thumbnail sketches. Then I go back over the play before I talk to anybody. I go back over the play, the dialogue, just the dialogue, in detail and I make charts to myself about 'where'. I look for any kind of 'where' clue that's in the dialogue. Where meaning interior location, exterior location, and what country it's set in, what kind of house this is. So I have to collect a lot of data, a lot of information from the dialogue about 'where'.

SCENE	VIDEO	AUDIO
		If I don't write it down, I have found that I either miss stuff or I make a mistake later on, so I can't rely on my memory in that respect. I have to make a chart. It is also useful for bringing to a production meeting, when somebody says, "What is this about; what's happening here?" and I say, "Look, it is set in this room, here is the reference and the dialogue." At the top of the heading I have 'where' and it goes down Act I, Act II, and all the references in order as I read through the script, and then on the right hand side of that page I might make a little note to myself or a little quick thumbnail sketch. I might make a little note about "check photographs" or "go to the library". I might write down words like "clutter" or "Victorian" or for instance, for this play I would have written down "Boston". Boston is referred to in the dialogue and if I say "Boston" then I have to remember to check my own travel file about Boston. It means I have to go to the library to look for books about architecture in and around Boston.
14.	Video/Stills	"Clutter" comes from the whole play; "clutter" is really visual images. That's really in another category but they get all entwined. "Clutter" is made up of visual imagery and shows the audience that this room is where someone has lived. When we live in a room we collect stuff around us. When we walk into somebody's living room we take in the whole room at a glance, and then we spend the rest of our time focusing on the person but our unconscious visual eye has taken in what has been going on. "This person is interested in owls" or "This person is interested in such and such." and unless it is really strong, it won't come out in conversation, it's just there and we have all kinds of things that hang around the periphery of our visual frame. So I have to remember to do that for the set too. I know that I have to give the impression that here's a room that somebody has lived in for 20 years.
15.	Name in Conversation	So after the charts, where I go through 'where' and 'when' and 'who' is involved, I then have to make sure that I think very carefully about any kind of metaphor that might be called for. For instance, when I did a pantomime set last Christmas, the image was bright and cheery, so I used primary colours. I wanted to do a kind of story

SCENE	VIDEO	AUDIO
		book thing, because it was Red Riding Hood. The association went like this: Red Riding Hood, story book, primary, Kindergarten kind of thing, primary to primary colours, which led to primary colours being used on the set. That process was very, very quick because that was a very simple script.
	Name Demonstrates	I wanted to have flats that were folded like my hands together, like praying hands - and then one flat would fold out like this in front of the audience's eyes. Wonderful! Magic! I love seeing such changes, however the director was very traditional. For him the magic of set changes happens behind the theatre curtain and behind a drop. There's a tradition that goes with pantomime in which you play in front of a curtain that drops down and there's decorations on it and then up goes the curtain and there's a whole new set behind. I wasn't going to argue with that. However, I did persuade the producer to do the program as a story book.
16.	Close-up of Drawings	Okay, I've done my thumbnail sketches and my lists. Now I have to do a larger drawing because I have to communicate these ideas to the director and to everybody else involved because you can't do it with words, you know, they understand words one way and I understand words another way when I talk about scrim or I talk about transparent sets or insubstantial sets and so on - and they nod sagely. However, I know they don't have the same image, so I have to do some large drawings. I have to do some renderings of what I have got in my mind; it's to scale, it's usually in a perspective, so it's really not set in the theatre but it gives them an idea. I work everything out in black and white, colour is the last thing that comes to mind. I don't know why, I suppose it's because I'm concerned about the structure. It's not that colour doesn't come in the play very early on ... it's just that I don't do the work in colour until later on. For instance I do think of colour when I'm thinking of metaphor. When I think of image I'm thinking, "What tone? What kind of colours are being used here? Is this a pastel set? Is this ....?" And in this case there were pastel touches because of art deco and because it's a woman's room from the '30s but also, I want blood. So I've got blood red bricks and I want a very

SCENE	VIDEO	AUDIO	
			oppressive kind of feeling at the same time. So it's not going to be light and airy. It's not going to be light and airy colours and that kind of thing. I haven't said, "This is going to be blue." I have said, "This is not going to be pastel" and in that sense colour comes into play. I also have to think 'textures'. What kind of textures are involved in it? And that happens as I'm going through the big colour renderings and working out the model set. The black and white drawing is for me. I may take it in so that everyone can see the structures. I also need to take a sense of colours to them as well.
17.	Name in Conversation with R.C.	R.C.	When you are working on your theatre design, how do you see the employment of intuition and the 'aha' in that process? Where is 'intuition', supposing that that precedes the 'aha' experience? Could you pinpoint that in terms of Veronica's Room?
		N.	I'm having a hard time with that. I don't know if it's my concentration or whether it is the concept of dealing with it.
		R.C.	The question or the play itself?
		N.	No, I guess with the question. I don't ... I'm not sure whether you are asking me - are you asking me to pinpoint an 'aha' as I have been working on the play?
		R.C.	Yes, if you can do that, I'm actually interested in what precedes that.
18.	Back to Video	N.	Last night I was trying to work on the problem of a small puzzle table that would fit right on stage without blocking any view points and also be in style. And ... one set of information that I had was about Victoriana, another set of information I had was about art nouveau, and another set was about deco, and another set of information was about the needs of the audience, and another set of information was about sense of visual unity within the set itself. The room like the table had to be right for the room. It had to be right for the character. It had to be right for the period, right for the audience. It had to be right for the actors and I think there was, there must have been a point, because I got the table made. There must have been a point in which I solved those things. I was able to make some

SCENE	VIDEO	AUDIO
		kind of connection or some kind of synthesis I suppose. But I don't quite see how intuition comes in there.
	Voice Only	R.C. How do you know that it's right?
		N. Oh, that's interesting, I think I said that on the tape last night, "How do I know this is right?" That's the 'aha'! That's when you say, "Yeah, this table is right." I suppose because in my mind I can visualize the whole room, it's like writing a composition. It's like that author who's written about people writing. If you have in essence what you keep on hold almost in front of you on a 'visual float' someplace, a sense of where you want to be. What the final product wants to be and when you get the right word, you know it's going to fit into that final thing. So when I get the right table for the set, I know it's going to fit into that final image.
	Voice Only	R.C. What do you mean by 'visual float'?
		N. Well, the image is floating in my mind someplace.
		R.C. Is it articulated at that time or are you just aware of a sense of it?
		N. No, it's like a very fuzzy jigsaw puzzle. No, it's not a jigsaw puzzle - sorry - a jigsaw puzzle has blanks in it. It's like a very fuzzy template and if I finally arrive at the right shape, whatever 'right' means, I know it's right because it fits the template that's there and suddenly that fuzzy template becomes clear at that point.
	Voice only	R.C. How do you see the template? Now when you say 'template' to me I see something that is flat. That's my experience in templates.
		N. Yes, it's like a drawing.
		R.C. Is that what you mean?
		N. Yes, well, now wait a minute, you see it's like a series of drawings that are superimposed on each other because, you see, I have to see the stage three dimensionally, but no, I see it like a drawing.

R.C. Did you say layered drawing?

N. It's funny, well almost like a computer drawing in which the computer draws the very back wall for instance and then the next layer of material and the next layer of material and the next layer of material as the whole room moves forward.

R.C. So it is almost like transparent overlays?

N. Yes .... .

R.C. When you say, "aha, that's right!", does anybody ever disagree with that?

N. Not usually.

19. Name in Class

If I'm making things that I'm going to keep that are going to stay, I make them for myself. I've taken a couple of lithography courses at the Art Gallery of Ontario because I wanted to learn how to do lithographs. I really enjoy that medium. I don't intend to teach lithography; however, if we had the equipment I probably would.

I started teaching art. Now that I'm teaching it, I'm thinking of ways to teach etching. Almost nobody teaches lithography in public school. However, I know somebody who actually has a stack of stones. He found them by pure chance. They were sitting in somebody's yard. The guy was using them for a footpath and this fellow happened to walk by and he knew lithography stones and said, "I could replace those for you if you would sell me those ones." And the guy said, "Oh, I'll just do you a trade." Now he's got a whole collection of them. Then he persuaded the school to set up the proper lithography equipment.

When I took lithography courses, I wanted to experiment with the technique first. The second time I was concerned about the image, and then the third one that I took, I made the mistake of really getting committed to the image and I never got anything at all. It was so frustrating - 10 sessions - I ended up in tears over this stone that was not giving me anything at all. Well, that's not quite true. I never did get the good proof from it. Part of me suspects it was because I was doing a totem pole from K'san and the K'san spirit from the totem pole did not want to get reprinted. However, technically, what was happening is that I was letting stuff dry out and I wasn't

SCENE	VIDEO	AUDIO
		using right combinations and things. But I liked to think it was the spirit of the totem pole.
20.	Name in Conversation Totem Poles/ Name again	Totem poles have long held a fascination for me. When I was out visiting a friend in Kitimat, she and I drove around to several places. We went to Kitwonga and K'san and also, oh, what was the place where Emily Carr had been? Well it's because of Emily Carr and the influence that I knew I was sitting in the same village where she had been drawing and painting and said, "Oh, this is where this lady worked. Oh boy, this is really exciting!" And I have really enjoyed reading legends; I like reading legends, I read them for myself - and I like reading Indian legends - reading Indian culture - West Coast Indians. I guess what caught me first of all was Emily Carr's images of the forest and totem poles, but long before this I was impressed by the totem poles. That was when I was living in North Vancouver. At that time, I guess I was 7 or 8 years old, I would make tiny dioramas in shoeboxes. As soon as I thought of that I realized that that's the connection between art and the theatre. That had to be a really major influence because what I remember (I don't remember any specific dioramas) the pleasure of taking the lid off the shoebox and setting the holes in one end and then light holes to go along the side and working out the little spaces for things to go and setting up the scenes, gluing it down and colouring it, doing whatever I was doing with it and putting the lid back on and holding it up near the light and letting light come through - and there was this wonderful 3-dimensional thing happening in the shoebox. I only remember doing this in Vancouver. I suspect that my mother gave me the idea about the dioramas. She might just have read it or seen it someplace herself and said, "Why don't you try this?" But what I remember is the pleasure of doing it.
21.	Slides of Name's Work	Something else that has given me a great deal of pleasure recently is 'eggarton' art. It's made from an egg carton. Not a plastic egg carton - it has to be the maché kind, 'cause it takes poster paint easily. I suppose tempera too but I use poster paints. What I do is this. I open them up and create a scene which involves the flat side and the peak part that separates the hole parts where the eggs fit in. This one's called "Eggscape" because it is an egg carton and it's

a landscape. I have added another mountain peak - this is one of the egg cartons that has really, really steep separations. As soon as I saw it I thought, somehow, immediately of mountains. I have added 3 pieces, so in the centre piece there is the flat lid and then the two sides, left and right. Oh, they are made for hanging on walls too. They are seen that way, or you could put them on a table so to look down on them too. So in this one I have mountains on either side and an alpine village up in the hills and there are glaciers and roads going up to the top of the mountains. So there are roads going all over the place and down into the valleys and up into the mountains and there is snow on some mountains and there is not snow on other mountains and then in the centre there are fields which have been ploughed and there is a village with a church and houses and mill and trees and so on. It's almost like an ..., it's an aerial view at the same time that it's ... I've suddenly realized that it's kind of like a primitive painting, because I have done an aerial view but I have done a straight-on view of houses. Huh, that's funny!

The other one is just sort of a plain egg carton. I haven't added much colour except I have used markers and this is an egg carton that has holes in the lid and as soon as I saw it I thought of beaks. I thought of birds, mouths, that kind of thing. It had 3 pieces to it and because I had already done another eggarton piece that had an ear on one side. Also, I had done eyes, sunken in, where the eggs usually sit - that's the third one. The one with mouths where the open areas are and sunken eyes (with eyelashes streaming out into the eyeballs) at the base of the egg carton where the eggs would go. The ears are the flap that closes the whole thing. So I call it, "Hear Evil, See Evil, Speak Evil".

I've just realized the West Coast connection: Totem Poles, Dioramas, Vancouver, experience re-enacted in another way. It's true! My egg art is the combination! This one is just one egg carton and it's opened up and it is in very, very bright colours (all primary colours). On the lid, which is a flat lid, I have drawn an ear and on the parts that stick out, there are noses and I have actually drawn in nostrils and then the base of the egg carton where the eggs go. I have drawn in eyes and, oh, I know where this came from: a friend of mine has a papier maché box that somebody had found. Just an old box and painted it so that there was a sun on the front and you opened it

SCENE	VIDEO	AUDIO
		up and there was a scene continued inside. And it was hanging on her wall and I can remember thinking, "Oh, this is a really neat thing." That had long been in my mind, I can do something like that. And then there was the time I was shopping for groceries and going past an aisle and I found a package of those fake glasses, little plastic party glasses that have eyeballs, little paper eyeballs in them. And I'm sure at that point that something happened - and I took the package home and very soon after I had an egg carton handy and so, immediately of course, I said, "Right, those are the eyes." The glasses will perch on the nose, so I painted everything up and then I attached the glasses, just cut slots so the glasses would slide through and there's that irregular stacking that goes on too! So that's where that came from and to me it's still a delight! I did that for me. and did that before I started teaching art but now that I teach art I have the kids do a found art assignment which is the most creative thing that they go through and it really accentuates the creative process in a very powerful way.
22.	Name Teaching this Lesson	I start the class off by saying that today they're going to be garbage pickers and they have to make art of garbage - so then I show them a movie which is called "Junkyard" and it has no dialogue in it. It's just music and it shows shots of a car junkyard. It demonstrates that there are beautiful things in junk if you just look. A second movie I show them is "Creating Something from Found Objects", making art from found materials. That's just techniques, but it also sparks ideas and shows them some examples of things that have been done and then I show
	Shows Actual Art	them some of the stuff that I have done. I've got clothes pegs, the old fashioned clothes pegs, which of course I have turned into people and then put them on an old fondue pot stand so they are all standing around in a circle and I call it "Conversation Piece". That was for me and that was before I was teaching art too. So I show them some of
	Slides that Name Talks About	the things I have done and I show some slides and pictures of stuff that other people have done and then I explain the criteria. "We are going down to the woodshop and you're going to scramble through the woodbox, the scrapbox, junkbox and look for pieces of wood that are neat." (I show them pieces of neat looking wood, and I just use wood, probably because I personally really like wood and the colour of wood,

the texture of wood and then the paint on wood. There is an image on top of the found object and it uses form, sculptural forms as well as a painted image, and the picture can continue. We do some brainstorming: what could this be? By this time, of course, they've caught on.) Then we go down to the woodpile and they sort through stuff and it is fascinating to watch. They pick up pieces of wood and say, "Oh, look at this" or they say, "This one's neat!" "Oh, what about this? Now this could be a seal, no, I think it's a bird, well, maybe it's a fish." I say, "Oh, I think it's fantastic." They will do this with a piece of wood they don't even use and they say, "Oh, this could be a fish" and put it back down, which I think is a really exciting creative process. They don't have to make something out of it. And then somebody else picks it up and says, "Well, I'm going to use this." And then they come back and the process is really a matter of sanding them down. I say, "You can't change the form, you have to work with it as you find it." The only thing that I ask them to do is sand it so it's smooth and safe to handle. And then they glue it together and paint it or they can paint it and then glue it together, depending on what the pieces are like. Then they give it a title. They have to make a title card and artist's name and we put it on display. An then after that when they are all done on display, I say, "Well, let's look at these. Which are your favourite ones? Where do you see some really exciting looking art? Let's talk about some of the transformations here."

Some times at the end of working with this stuff there's still wood sitting in the room and I hold it up. This happened by accident last year, but I did it on purpose this year. I hold up the piece of wood and I say, "Is anybody going to use this? What could it be? Is anybody going to use this?" Nobody is going to use it, so I throw it in the garbage and immediately there is a cry, an outcry from two or three kids which is quite spontaneous! "That could have been ..." and that's the lesson! Then, of course, after that's happened spontaneously, there will be a couple of kids that join in and they say something like, "That could have been a really important piece of sculpture there, you know, a really major piece of art!"

23. Name in Class

I've realized that a great deal of my art is very sculptural. I am interested in structure and on that often I impose almost another

SCENE	VIDEO	AUDIO
	Visions with Permission	with Prosch, who's an artist out West and he's one who makes those wonderful landscapes on helmets. He started off just painting on helmets, and he's gone on from there. This is in the program series Visions. He's also done work in which he takes forms, they can be blocks, cubes and so on and he paints a landscape on one side and then he continues the landscape over on the other side and that to me has terrific appeal. I really, really enjoy that.
24.	Name in Class with Student	I like using unusual materials. I think it's wonderful for the kids. It stretches their thinking. Unusual masks are a rather good project. We don't make them to wear although I say to the kids when we are working on masks that they can be wearable. I like the kids to experience working with clay so I ask them all to do clay masks and they can be clay as sculpture or clay as wearable art but they usually become wall sculpture. They can also work in papier maché which I really enjoy and plaster, you know the plaster strips from Lewiscraft, and we use those too. Once I found hubcaps at a fleamarket and said to myself, "Oh, these would make great mask faces", so I picked them up and that's what I used. Sometimes I have [Student Name] come in and do a demo of the technique and also to show some samples. Actually, she is a painter, but in the last few years she has done clay masks. She brings her own masks and they are beautiful. She talks about her enjoyment of very organic things and seasonal things and she also has a lively sense of humour and she just makes a series of connections. She will say, for instance, that this mask came from a walk in the woods; it became a swamp spirit. I have one of her masks which involves a badminton net and bone earrings and so on. She was cleaning up the garage one day and she found a badminton net there. She was also working in clay at the same time, so this particular spirit mask now has hair of badminton all draped around it and so on. It is really quite gorgeous!
25.	Name in Conversation and Close-up of Drawing	However, life drawing is my favourite, absolute, all time favourite art form. I did a drawing of a pot bellied stove when I was out in Banff, one year. It's right here. I still haven't done anything with it. My all time favourite is drawing; I really enjoy drawing.

So I think actually what my other stuff becomes, is drawing on any kind of surface I can get my hands on and then I add colour to it - like the egg carton work is drawing on egg cartons really. I'm drawing with paint, I'm drawing with markers. It's not what I would really consider painting but just drawing and then colouring it in.

The pot bellied stove, the Banff drawing, the big charcoal drawing, it's about five feet by seven feet; it's actually larger than the stove.

I had gone out to Banff School of Fine Arts for a ten-day drawing and painting course and at the beginning we had an instructor who's a painter and she advised each one of us to set a goal for ourselves for the time we were there. I always work very small and probably because I just carry study books around with me all the time and I draw in them when I'm travelling and sitting and waiting for buses and trains or something. And so I said, "Okay, I'm going to work big." So I did and I finished up with this drawing that was five feet by seven feet. Ah, there was an influence there though. At the gallery at Banff there is a huge charcoal drawing of - it might be life drawing, I can't remember what the image is - but I know it is a big huge charcoal drawing. I said, "Oh, I can do that." So I knew I was going to work big and I wanted to work charcoal and that (I suddenly realized it) big drawing was an influence, I know that now. And then I happened to be walking downtown to do some errands and I walked through a back lane and there was this beautiful old stove that someone had just thrown out in the back lane. "Oh beautiful lines. Look at the shape. Look at the detail." It had a name, lettering on it and so on. It was a nice soft colour and it was just sitting in the grass and I guess the lighting was just right. I said, "Oh, I can do a portrait of the stove." So I went back the next day and took my little drawing stool with me and my sketchbook and so on, sketched out the stove and then took photographs of the stove and took photographs of the grasses that were there and took some grass samples and so on. I came back, tacked up the paper and drew it and then I hairsprayed it and carried it home on the plane. I think it probably took me, maybe, five mornings. It couldn't have been any more than that because a lot of our other time was taken up with other things. My all time favourite drawing!

SCENE	VIDEO	AUDIO
26.	Name in Class	Sometimes I have to restrain myself from saying, "Oh listen, I think I'll just take the next five days to do some stuff." It's not really that I have to restrain my enthusiasm for art things, particularly for drawing with kids, but I have to be careful not to demand too much, as far as drawing is concerned, from kids and just for instance I have to be what I have to be - really alert for when a kid is ready to experiment with shading and then I can step in and say, "Now why don't you try this? Look what happens if you use a 6B pencil this way, look what happens ..." and I have just discovered what happens with hard pencils on tracing paper. "Oh, gorgeous texture, I love it, so it's going to be a new assignment for kids, so the spillover happens. It may happen that the artist in me may demand to get out but often what I'm doing in the art classroom triggers something for me that I'm doing myself, or vice versa.
27.	Name being Interviewed	R.C. I was thinking about the things that you have said and it occurred to me that you talked about the room that was both a cage and insubstantial, you talked about the glasses that you picked up in a supermarket and you talked about the egg cartons, of course, and the clothes pegs, and what I see you doing is taking the ordinary object and making it extraordinary. Now there are two questions that occurred to me in conjunction with that. First, what is it about an object that makes you pick it up and use it? And the pot bellied stove, of course, too - well, you didn't exactly pick that up, but could you pinpoint, do you think, what it is about that particular object at that particular point in time? How do you know to pick that up. And the other point is, what do you think the value of this process is in teaching? (Pause) You do the same with your students and I think there's a real learning experience there but what do you see as a learning experience? N. I think the first thing that comes to my mind is something we talked about in the first tape, which was visual awareness. Personally, I think I tend to see things in a very anthropomorphic way. On a street that goes up from U. of T. campus all the way straight up to O.I.S.E. there is a fire hydrant which is sunk

quite low in the ground and I keep wanting to put a pair of sunglasses on it or a telescope or a periscope or something and put on a title, "Underground Spy". You know, something like that, and often times when I look at trees I also see (not distinctly, I don't know how to explain it) but I have a sense of the tree being repeated in very much the same shape down below the ground. And so that I get this - double. It's not double vision, but it's double image, so to speak, and when I look at pipeworks and so on that are on the sides of buildings or gasworks (there's one in Oakville that I would like to paint faces on) and that's all I would have to do, the bare minimum would have to be to put mouths or eyes - even just eyes - and the whole thing becomes this multiple creature, not necessarily human, you know, it is a zoomorphic kind of image. But then there has to be something that goes deeper than that too, there has, I guess, there has to be visual, there has to be a visual punning going on.

R.C. Well, part of that, I think, is your own sense of humour.

N. Maybe.

R.C. But I think there's still something else, but it's interesting you are talking about the animation of the inanimate object. Does that not remind you of something else?

N. (Laughs) You have something in your mind; I'm not going to guess what's on your mind!!

R.C. Well, think about the masks, the badminton .... .

N. Oh, the badminton ... I suppose it's making connections, it's making quantum leaps between one thing and another and animating the net which is .... .

R.C. But isn't it what Emily Carr was doing too in a different way, in a different medium?

N. Oh, that's interesting. She was seeing a spirit in the forest in the trees so that eventually she wasn't painting trees, she was just painting the spirit. Yeah.

R.C. You are imposing on your own environment or maybe seeing in your own environment something the same as the Indians do, and what Emily Carr was trying to (I think) transmit to other people.

N. I suppose. I hadn't thought of it like that.

R.C. Well, I mean that's one way, one level of looking at it, perhaps that's reading into it something that's not there.

N. It's not something I consciously feel.

R.C. There isn't, you know, that 'aha' recognition. Let's just consider, perhaps the glasses, the plastic glasses. Was there anything about those ... ?

N. I thought they were hilarious!

R.C. So it was humour first, but did you know at that time that you were going to use those in some art form?

N. I can't remember, I can't remember whether I had the egg carton in mind already or I saw the glasses, and then made the connection. For instance, my mind might already have been working around the eggarton as nose and eyes, and then - I bet you that's what happened really, then I saw the glasses and said, "Aha, I can add these to the eggarton!"

R.C. Yes, so again it was the imposition of something extraordinary on an ordinary object?

N. Or anthropomorphizing an inanimate object. That's interesting - that's also what I ask the kids to do - like I have imposed my view, my vision and humour on the kids ... .

R.C. You've just anticipated my next question! (Laughs)

N. Well, you know, I thought of the crocodile that one of the students did, which is just a piece of bark resting flat on a piece of plywood and she's added feathers at the tip of the bark and then she has used sticks and tissue but those are the things that she's used. What she has done with the sticks and the tissue and the bark and the paint and the glue is, she has (Oh, and she has got a couple of blocks of wood that she has painted these bloodshot eyes on) and what she has created is a crocodile appearing above the surface of the water and then it was like that for quite a while. And then I came in one day and she had feathers there, so she's also made this leap but by talking to you, what I have done is I have imposed my humour and view and

SCENE	VIDEO	AUDIO
		visual awareness, which is what I want to teach in art anyway. What I want to teach is that visual acuity, and just exciting perceptions going on and connections being made and quantum leaps and the excitement of being visually aware. You see, personally, I get high on ideas that hatch inside my brain even though I don't do anything with them. I really enjoy and I suspect it might be an interesting physiological experiment some time to find out if there is some kind of actual ingredient that flows, some kind of juice that flows through the body, you know, and actually physically identify what kind of thing that happens when the synapses make connections and especially if they are going "uhm uhm uhn, spark, spark, spark".
		R.C. I think there probably is ....
		N. I wouldn't be surprised. And I swear that something happens because with kids, you can see when an idea goes on, their eyes light up in a sense, their whole body becomes a little livelier and their faces become livelier and you know it would be an interesting study at some point. But what I have done there is impose my own view on what they have been doing and they have imposed their sense of humour and their animation, their anthropomorphic view and their zoomorphic view on pieces of wood, hunks of bark, pieces of tissue ....
		R.C. How does the school view what you do? Do they appreciate this kind of program?
	Close-up of Tiles	N. Yes, there are two teachers in particular, one woman walks in, she teaches history and every once in a while she just cruises into the room. She knows that she's welcome and in fact everybody is, but she makes the effort, every once in a while, she just cruises in and she says, "You know, I really love coming into this room, there is so much going on, there is such neat stuff." And when the kids were painting ceiling tiles, she happened to come by and she said, "Oh, I want one of those above my desk in my history office." There is arother woman on staff too, who herself is artistic and is involved in theatre and teaches English and she comes in sometimes and raves about what the kids are doing.

My department head always worries in the spring when jobs start being advertised, or he says, you know - well part seriously, part humourously and, of course, flatteringly too - he says, "You know there's an opening coming up in so and so and I hope you're not interested." Very tongue-in-cheek. I know he appreciates what I'm doing and he's always very supportive. If I need something he says, "Yes, I'll have it for you tomorrow" or, "Here's a source" or something. Whenever I have had to go to the principal, I have never encountered a roadblock and no roadblocks have ever been imposed, you know, so I take that as tacit support and once in a while, if he's not too busy, he drops in and cruises through.

28. Name in Class N.

My philosophy is that I would like to expose my students to an artistic expression which they can indulge in in their own leisure time, now or later on in school, so that, for instance, if they are looking through the community course flyers and they see advertisements for say, stained glass or clay hand-building or drawing or batik work, or something like that and they have had some exposure to the technique in my classes and some interest because I don't believe people can be interested in something unless they already know something about it. If it is a total blank, if they have no knowledge, there can't be any curiosity about it. I don't know which comes first, maybe you have to be curious about stuff and you learn something about it and then you get more curious and then you want to learn more.

I mean, if the kids are exposed to working with clay and seeing what other people have done, and then as consumers they go to a crafts sale for instance, or they go to an art gallery by sheer chance or they go to another city and as tourists, often times, they will go into places they wouldn't go into at home and there will be connections. The ground work ought to be there - but I like the networking idea. Sometimes the kids will come in and say, "Hey, I saw something similar to ... ." It happens rarely, but it does happen. It happens just enough to keep me in the profession. I was thinking today, "Gee, I wonder if I'm selling my kids short" and I thought, "Well, no, just a minute, there's something here called personal survival" and unless you get some kind of feedback, you stop sending out the messages and I get enough feedback to keep exposing my enthusiasms and enjoyment for art. I also believe that it's a most personal satisfaction which is a means to happiness and a sense of accomplishment and if it's a sense of artistic accomplishment then I think that's just icing on the cake. I really, really strongly believe that artistic accomplishment and I don't mean self-expression, I don't mean that kind of self-indulgence, I mean an artistic accomplishment, something. It could be making a quilt, it could be something that comes out of the person that the person has made, it could be a beautiful turkey dinner for Thanksgiving, it could be anything that the person has made and it comes out of themselves. Then there's a source of happiness there. If I can provide kids with a broader base of that artistic , ... or some exposure to ways that they can maybe develop their own personal sense of accomplishment, then I feel that I'm creating good citizens.

R.C. When you go about planning your year, how do you decide where you are going to begin and where you are going to? What kind of process do you go through?

N. The problem is that if I were designing four years of art courses, I would not design it the way it's taught now. Ideally, I would think out a developmental kind of approach so that what happens at a particular level is tangential with the kind of language development that also happens in that grade. For instance, I would base my courses much more on a thematic approach. Right now the courses are very much one project after the other and I haven't found a way to escape from that yet. I'm still working that out.

I think it's time to start building a bigger network. Because, you see, when I see the kids in this room working on clay, a lot of the kids are stuck for what to make, they run up against a blank wall. It's like writing a composition and you sit there looking at a blank piece of paper. You say, "My God, where do I start with my idea, where do I begin?" and I think providing a network of what other people have done, not that I want kids to copy, 'cause I don't, but providing that network enables them to

SCENE	VIDEO		AUDIO
			dig into themselves, they have a bigger sandpile to dig into in a sense ... to pick out something.
29.	Name in Conversation with R.C.	R.C.	Let me just change horses here, a little bit. You've talked about, you've said to me just recently, that something didn't strike the 'aha', now assuming that by the 'aha' you mean some intuitive understanding ... do you?
		N.	Yes, I'm using 'aha' in a way that the language arts people have used that 'aha' experience. I think it, what it's called, in which there is that recognition of all the pieces of the puzzle fall into place and say, "Oh yes, of course" or it's the point where the light goes on. I think it's the point at which there is this really powerful connection between the synapses and boom!
		R.C.	Is that your definition of intuition?
		N.	No, no, I think the 'aha' experience is when two things or five things connect, no the 'aha' experience is a connection.
		R.C.	How do you define intuition?
		N.	If I know something intuitively, it is something that I know to be so, that I haven't wrapped words around yet.
		R.C.	Could it have any connection with the 'aha' experience?
		N.	The 'aha' is wrapping the words around the intuition? I don't know! Um ...
		R.C.	Is that something that you can promote or is that something that comes from somewhere else, do you think?
		N.	I can set up the circumstances for it because I've seen it happen in the classroom.
		R.C.	How do you set up the circumstances?
		N.	Well, next time I will plan it. It happened accidentally this time, but next time I will plan it in that I give the kids the assignment. This is still in connection with the found art. (I keep coming back to that one because it really evokes the highest creativity. I'll give the assignment that they had to walk around the school with a partner to look for potential "found

SCENE	VIDEO	AUDIO
		art". They will have to look at the school with fresh eyes. And the kids will see things around the school, noticing things like thermostats on the wall, blank walls that could be something else, water fountains - there could be other things. And I can see the kids as I am going around talking to each other and making sketches of what they could change the stuff into.
	Review aspects of the film material in sequence. Fade out as conclusion.	

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